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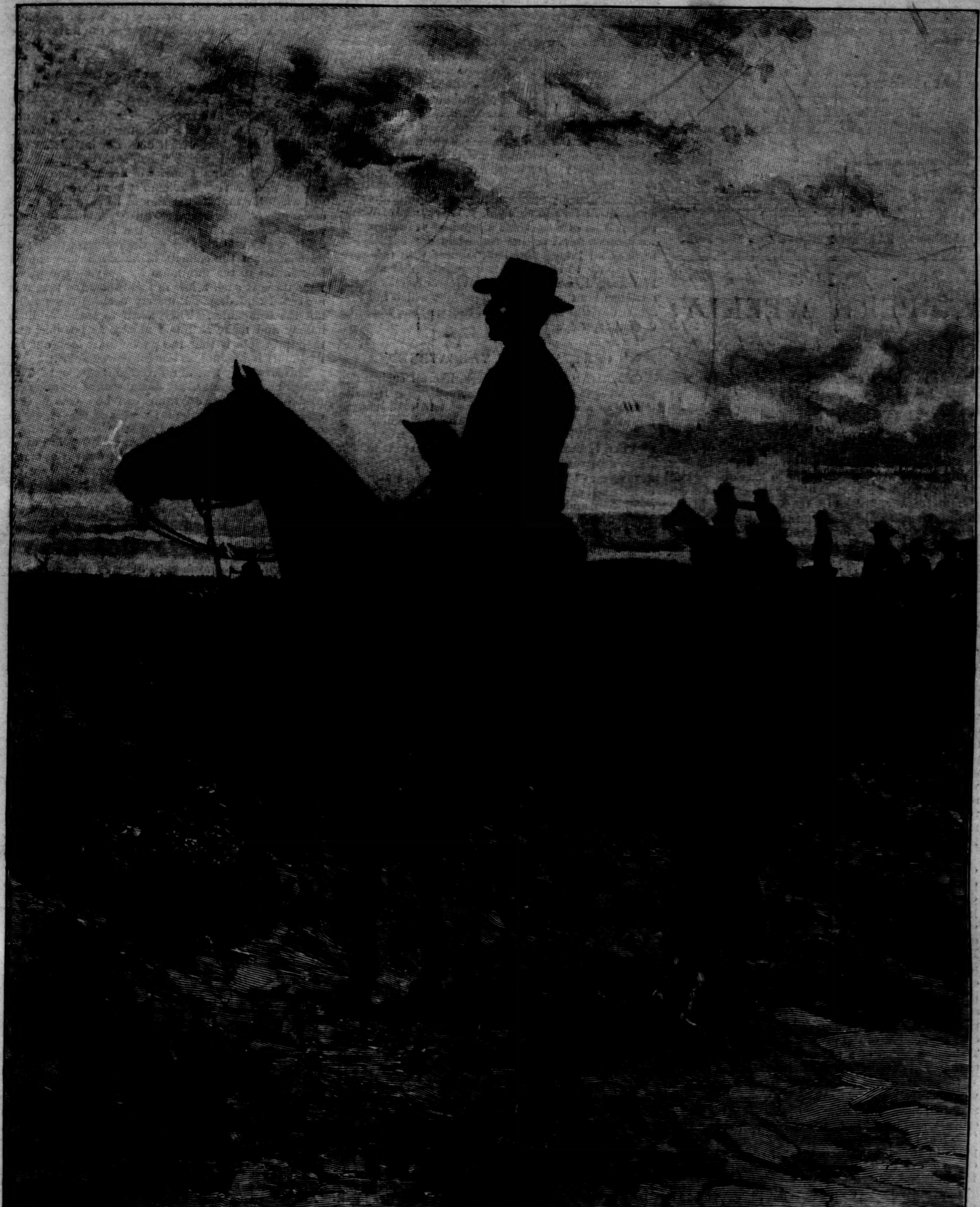

"THE SPECIAL CORRESPONDENT."—From the Painting by R. F. Zogbaum.—[See Page 583.]

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WITH

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A DEFENSIVE NAVY.

IN his speech at Woodstock on the Fourth of July President HARRISON said, "It is not in the power of any people upon earth much to harm us, except our own people," and "all the more, exempt from thoughts of foreign assault, ought our thoughts to turn to dangers which are internal, and from which alone we can have serious harm." These words, so far as they concern our foreign relations, are not mere Fourth-of-July buncombe and optimism. They state an unquestionable fact. No sensible man has seriously supposed that we should come to blows with Great Britain about the fisheries or the Behring Sea, or with Germany about Samoa, or that any great power would not hesitate long before appealing to the last resort to settle a difference with us. President HARRISON'S words are an unconscious comment upon the demand for a huge navy. The condition he describes, and the Samoan understanding with Germany, and that which undoubtedly will be reached with Great Britain, are all coincident with the want of a navy, and suggest some important considerations. One thing, for instance, is evident. A great power with a continental coast should not suffer her undoubted possible resources in an emergency to prevent her from avoiding emergencies by immediate readiness to meet them when they arise. Another thing is no less evident. Such a power must not permit such readiness to be the pretext for a bumptious foreign policy.

Two of the weightiest of recent Commencement orators—Mr. EDWARD J. PHELPS at Harvard, and General FRANCIS A. WALKER at Brown—treated this question. Mr. PHELPS pleaded for a definite foreign policy, regardless of domestic parties, and continuously sustained by every administration, and as its adjunct and bulwark, a navy. We presume that Mr. PHELPS means to favor a policy founded upon certain postulates, as, for instance, our primacy upon this continent. But after the familiar fustian about manifest destiny, it is pleasant to hear of justice and equity, and our interests only as subserved by them. This principle is absolutely sound, but the policy, or specific application of the principle, cannot be forecast. The construction of a navy, however, should be determined by certain precise conditions, which General WALKER has stated generally in a letter to the *Sun*, which had commented upon his discourse. He would maintain an adequate number of first-class, high-speed cruisers, and would so fortify our principal ports that "no fool of a foreign admiral could, under any impulse, in any complication, bombard one of our chief cities, or exact tribute or hostages from it. Not less than this is due to ourselves."

General WALKER then points out the extreme to be avoided in the project of a navy, and he agrees with the President that there is no serious apprehension of external assault.

"What I deprecate is the undertaking of such armaments as would invite the angry discussion of contested rights, or inspire a jingo administration to seek a little cheap glory by boisterous demonstrations which would be likely to result in actual conflict. The time will never hereafter be, at least until our nation shall be disrupted, when we cannot secure by fair discussion and wholly peaceful demands all that is clearly our due. By the close of this century we shall be eighty millions, stronger in all the elements of industrial, financial, and military power than any two if not three nations of the Old World. It is absurd to suppose that any European government would deliberately seek to insult or injure such a people. The one great danger is that we may ourselves be tempted to abuse our power, to use a giant's strength tyrannously. It is the first duty of every patriot and of every lover of his kind to exert all his influence, in season and out of season, to draw and educate our people away from the perilous thought of international supremacy, and especially to point the young to the peaceful glories and the useful triumphs of industry, science, and art."

In a word, General WALKER favors a defensive and not an aggressive navy, both because the latter is unnecessary for our potection, and because it is a perilous temptation. This is undoubtedly the true view, and its plain statement is most timely, because the construction of an immense and extravagant navy would be very acceptable to those who favor a policy of extreme protection, which produces an enormous surplus beyond the just requirements of the government. The tendency toward a great naval outlay and the demand for a general service pension are illustrations of the serious mischiefs of a surplus, especially when its maintenance is the policy of vast vested interests. If it be from domestic dangers only, as the President says, that we are to anticipate trouble, he can hardly recommend great expenditures for a navy. As for a foreign policy, the counsel of Washington is as wise as it was a hundred years ago. If we propose to be neither filibusters nor bullies, but to meet all international differences with the equitable spirit which becomes unquestionable and acknowledged power, we can devote ourselves to the settlement of those internal questions which the President declares to be our chief concern, but which he does not specify.

CENTRAL PARK THREATENED.

CENTRAL PARK in New York, like all such noble pleasure-grounds, was not designed nor is it maintained as a common for circuses and cattle-shows, nor as an available space for fairs and exhibitions, upon however great a scale and for however important and interesting an occasion. If there is to be a national observance in 1892, of the four-hundredth anniversary of the discovery of America, and if part of the observance is to be an international industrial exhibition, and if that exhibition is to be held in New York, which would be undoubtedly the proper place for it, there is no reason whatever that New York should ruin the Central Park in honor of the great occasion. A report, which we presume does great injustice to Mr. WALDO HUTCHINS, the President of the Park Commission, represents him as saying that if the people wish to use the Central Park for a World's Fair in 1892 he sees no objection. We presume that the report is incorrect, because Mr. HUTCHINS knows as well as any man the character and purpose of the Park, and that the fact of its affording a large space for a fair would no more justify its occupation for that object than it would justify employing the Catholic cathedral for a similar purpose. They are both large enclosures. But they are not only designed for purposes wholly incongruous with such uses, but would require that upon occasion of a vast increase of people in the city their space should be more than ever unencumbered.

The price of a public park is that of liberty. It is eternal vigilance only which saves it from the incessant pressure of schemes of all kinds that would merely deform and disfigure it. Mr. HUTCHINS is a man of education and public experience. He knows New York and its politicians and newspapers. He also knows that there is an intelligent pupblic opinion which judges the conduct of public officers and determines their standing. There are certain enterprises which that public opinion arrests, or upon which its expression is so decided that its judgment remains. The buildings projected in the City Hall Park are of that kind. That project is a bold and knavish job. It is so understood, and its accomplishment will brand the Mayor and his associates with a stigma from which they cannot escape. The abuse of the Central Park as suggested would amount practically to its destruction. This is perfectly well known to the great mass of those who frequent it, and to all who take honorable pride in it, and to the President of the Park Commission as to all other intelligent citizens.

The parks should be guarded with jealous care, because one such perversion of them is a precedent. This is a country of equal rights. If a great public pleasure-ground may be wrested from its purposes by one enterprise, it must be for another. If it is not to be held sacred for the kind of recreation which it provides, it will be diverted to every kind that may demand it. We must be warned by experience. The Battery has been partly occupied by the Elevated Railroad, and the attempt to sequester more of it is incessant. The City Hall Park is already largely destroyed, and the completion of its ruin is now proposed by the Mayor. TWEED and his gang took the upper part of the Park, the United States snipped off the lower part for the Post-office, and now the eastern space is to be occupied. If so-called temporary invasions and obstructions of Central Park are tolerated, its total ruin will follow. Plausible pretexts of every kind will multiply, and the noblest public work in New York, one of the chief delightful pleasure-grounds of the world, will be sacrificed. This would be a misfortune so serious that, if the reported remark of President HUTCHINS was a "feeler," there is no question of the character and the force of the response.

WANTON SLAUGHTER.

As we are not fatalists in this country, and make our own laws, it is singular that the laws protecting human life are not more stringent and effective. Within the same week recently the awful calamity of a wrecked train consumed by fire, the torture of a man entangled in an electric wire, the instant death of four persons at a railroad grade crossing, with numerous other catastrophes of the same kind, were recorded. All of them were easily avoidable. Simple laws honestly enforced would have prevented untold suffering and sorrow. The real fault is not with the companies who own the roads and wires, but with the public, which does not insist that the price of the privileges for which such companies ask is reasonably assured security of life and limb. The electric light is very serviceable, but there is no reason whatever that its use should be permitted without ample safeguards and adequate penalties for their violation. Not only should the hideous disfigurement of city and country by the monstrous poles be forbidden, but the chances of human injury should be reduced to the minimum by burying the wires. That there is such a law in this State, and that it is neglected and despised, merely accuses the public, not the companies. They mean to spend as little money and make as much money as possible, and their principle is that the public must look out for itself. If it does not, so much the worse for it.

This is equally true of railroad management. Two things are as conclusively demonstrated by our railroad experience as anything can be. One is that cars can be heated without stoves, and that stoves in cars annually and needlessly destroy scores and hundreds of lives. The other is that crossings at grades without gates or watchmen annually destroy as many more. In both cases it is a massacre absolutely without excuse or extenuation. It is due wholly to the greed of companies unrestrained by the public. No company should be suffered to operate a railroad upon which in the event of accident passengers are exposed to the certain peril of stoves, and which are not compelled either to lay their tracks under or over highways, or to provide at every grade crossing gates and guards, with the severest penalties of negligence. The wanton recklessness of human life upon the Long Branch Railroad is shown by the fact that there is one passenger train at every point on the road every thirteen minutes upon the average, and during the busy hours trains pass at intervals of five minutes only. It is stated that nearly all the crossings are at grade, and that only a few of them are guarded. The persons who were the most recent victims had stopped for one train, and then proceeding, were instantly crushed by the next.

It is astonishing that such events should be tolerated month after month in a civilized community. The inevitable risks of railroad travel are, of course, many; but the great multitude of disasters are due to preventable causes. The condition of prevention is larger expense upon the part of the companies, an expense which experience shows they will not usually incur except upon compulsion. But to nothing can legal compulsion be more wisely applied than to the care of life upon railroads. If by the law of averages the number of accidents by rail for the next winter be forecast, it will be easy also to calculate the percentage of horrible suffering and slaughter which will be occasioned by the car stoves, and which could be wholly avoided. One of the worst forms of pecuniary corruption is the buying of votes in Legislatures by railroad corporations to defeat wise laws compelling a proper regard for the safety of passengers. The Legislature and the community which enforce the burying of electric wires, and either the abolition or the strict guarding of grade crossings, will have accomplished an immense public service and removed a monstrous public shame.

THE "ANGELUS."

ACCORDING to responsible statements the famous picture of the "Angelus," by MILLET, which has just been bought for the Louvre at the price of $110,000, was originally ordered by an American for less than a thousand dollars. It was secured for the French government at the late sale only after very sharp American competition. But if the American competitor had been successful and had bought the picture, the American government would have required him to pay a penalty of about $30,000 for introduc-

ing the work into this country. Yet it is not a demoralizing work, nor one in any way injurious to any interest whatever. It represents a peasant man and woman in the fields at the hour of the "Angelus," and as the bell sounds from the distant spire, they drop their heads in reverence, and repeat the prayer to the Virgin Mary which begins with the word. The same scene is described in the life of GEORGE HERBERT. When his chapel bell at Bemerton was heard in the fields, the ploughman stopped, bowed his head, and said a prayer. It is a significant incident exquisitely depicted by a master of the art of painting, and it is not conceivable that the contemplation of the picture could harm the most sensitive American mind. But the government apparently suspects in it some lurking peril as of moral dynamite, and compels the man who would expose us to it to pay about a third of its value in money, in order, probably, to repair some of the damage caused by its introduction.

This penalty is called protection of artists. But the very persons whom the government thus assumes to protect protest that they neither need nor ask such succor, and that, however well meant by a paternal government, it is a serious loss and injury to them. They declare that they are painters of pictures, and poor men; that in order to paint better pictures and improve their lot they must see great pictures, and as they are unable to go abroad for such study, it is a cruel oppression by the infliction of heavy penalties to prevent such pictures from coming into this country. They assert and prove that such a penalty is a total misconception of the principle of protection, because a picture, as such, has no market value. Only a picture which is the work of a particular man has such value, and even if the penalty for introducing fine pictures were absolutely prohibitive, yet the exclusion of MILLET'S "Angelus," for instance, would not cause it or anything in any degree resembling it to be produced in this country. The man who would give one hundred and ten thousand dollars for MILLET'S picture would not give one hundred and ten cents for somebody else's picture. How do we gain, therefore, they ask, or how does anybody gain, by punishing Americans for buying fine pictures and bringing them into the country?

In other countries the presence of noble works of art, whether paintings or sculptures, are held to be means of education, and most refining and civilizing influences. They are thought to be so desirable in Italy, for instance, where they abound, that there is a penalty for taking them out of the country, not for bringing them in. The most intelligent Americans have sought in every way to stimulate the production of such works here, to aid struggling genius by supplying means of education in art, among which none are more effective and inspiring than masterpieces of great artists. It is to see and study such works that many an American student at the utmost sacrifice contrives to pass a year in Europe. Returning home, he finds that the exclusion of pictures by famous foreign artists is a lessening of resource and opportunity to the American which renders the production of worthy pictures and the development of American art more and more difficult. Artists and lovers of art, therefore, have formed the National Free Art League, the object of which is to relieve American art—a term which includes knowledge, taste, and appreciation of art, of the immense disadvantage under which it labors by the heavy penalty laid in the form of a duty upon the introduction of works of art. It is not, as they truly say, a protective tax, because the increase of the price of foreign works of art does not benefit domestic production.

THE NEW STATE CONSTITUTIONS.

THE Constitutions of the four new States will be very interesting studies. The Conventions have ample experience and precedent by which to guide their action. Their work will be closely scanned to see whether the tendency, of which the California Constitution is the most striking illustration, to place a great deal of legislation in the fundamental law, is stronger, or whether the wiser disposition to state only recognized primary principles which should govern legislation and provide the necessary organization of government, will prevail.

It will be especially interesting also to observe whether the present degree of woman suffrage which exists in Dakota, Montana, and Washington Territories will lead to striking out the word "male" from the suffrage provisions of the Constitution. Wyoming, we believe, is the only Territory in which there is entire equality of suffrage. In other Territories there is some limited form for women, municipal or school. In Washington, although public sentiment is said to be favorable, the laws of this kind are temporarily inoperative. Probably the most that the friends of equal suffrage of the sexes can accomplish will be the submission of the question to the people as a separate clause. But Mr. H. B. BLACKWELL, in an address to the Convention of North Dakota, is reported not to favor this plan, preferring to leave the decision to the Legislature. It is further stated that Mr. BLACKWELL'S argument made a good impression, and that members who are opposed to woman suffrage are friendly to his scheme of reference to the Legislature.

In the new Territorial communities the subject has been more favorably considered than in the seaboard States. But the actual force of public opinion will be shown by the feeling and action of the Conventions. Entire neglect or the perfunctory mention which a political convention often gives the question would be a serious blow to the movement, because it would show that its hold upon the popular mind is not as strong as its friends often suppose. The Conventions are, of course, partisan bodies, and neither party has yet shown anywhere in the country a disposition to take up the issue. But nowhere better than in newly organized and sparsely settled communities could the inevitable experiment be tried.

SOME MISTAKE.

A LETTER from Washington says that the President is ready to name certain public officers in New York as soon as the party politicians can stop quarrelling over the plunder and agree how it shall be divided.

There must be some mistake in this statement, because the President was elected upon his express assurance that "in appointments to every grade and department fitness, and not party service, should be the essential and discriminating test, and fidelity and efficiency the only sure tenure of office. Only the interests of the public service should suggest removals from office." To suppose that he intends to do what this report alleges is to assume that the President of the United States means deliberately to break his word. There must be some mistake.

It is also stated that fourth-class postmasters are removed by Mr. WANAMAKER at the rate of a thousand a week. This also must be a gross and wilful falsehood, for the Republican platform declares that "the spirit and purpose of reform," not of party spoils, "should be observed in all executive appointments." Such a system of removals as is attributed to the Postmaster-General would be merely a freshet of spoils, and would bury beneath universal contempt the Republican claim to be the reform party. It not only pledged itself to reform, but pledged itself specifically to keep its pledge. To assume that the report of Mr. WANAMAKER'S performances is true would be to assume the party to be a party of liars. There must be some mistake.

In the same unaccountable way it is announced that Presidential postmasters are constantly removed during their terms without assigned cause. Now this is, of course, untrue. At least it must be so, because the President himself said of this very practice:

"I do lift up a hearty prayer that we may never have a President who will not either pursue and compel his cabinet advisers to pursue the civil service policy pure and simple, and upon a just basis, allowing men accused to be heard, and deciding against them only upon competent proof, and fairly. Either have that kind of a civil service, or for God's sake let us have that other frank and bold if brutal method of turning men and women out simply for political opinion. Let us have one or the other."

If there is any faith to be placed in the President's word, it is clear that these reports must be untrue. And who can it be who by such persistent statements shamefully brands the President of the United States with falsehood?

HUNTER'S-POINT-CUM-NEWTOWN-CREEK.

IF the axiom be true that in a popular government the will of the people prevails, it is the will of the people that the upper part of the city of New York and the gateway to the most delightful ocean resorts in the neighborhood of the city should be desolated by the most unspeakable stenches. It is certainly comical that the largest community upon the continent should submit quietly to the pestiferous nuisance of Newtown Creek and Hunter's Point. If popular government is unequal to suppressing a horrible effluvium by compelling the removal of its cause, there should be some abatement of our Fourth-of-July heroics.

A few years ago the Governor of the State undertook to deal with the nuisance; but it is now greater than ever. There was recently a special meeting of the State Board of Health, and Dr. BRYANT called its attention to the vile odors and the imperilled health of Long Island City, Brooklyn, and New York, and asked the Board to take vigorous action. The secretary replied that it could do nothing. It could act only through local boards, and as there was a quarrel between the Mayor and the Aldermen of Long Island City, there was no health board, and consequently nothing could be done to abate the dangerous nuisance. But as diphtheria has already broken out in Long Island City, and New York and Brooklyn could not escape much longer, it was decided to ask the Attorney-General whether he could point out a way of relief.

In a savage satire of SWIFT'S this might be expected; but read in a newspaper still smoking with the festal fires of the Gaylorious Fourth, it is inexpressibly amusing. A few men get up a stifling and sickening atmosphere which threatens as well as utterly disgusts whole communities, and nothing can be done! The most comical part is the look of those who are taking friends with them out of town to enjoy the delights of Long Island and the sea in reply to their friends' astonished and inquiring glance. The price of that pleasure is high. If all the perfumes of Araby could not sweeten one little hand, the briny airs of Rockaway are all haunted with the anticipation of Hunter's Point upon the return. John Bull used to say that Cousin Jonathan hadn't the pluck to pitch the thirteenth man out of the omnibus. But Hunter's-Point-cum-Newtown-Creek is the most colossal, imperturbable, and irremovable thirteener on record.

ANOTHER WHACK AT PESSIMISM.

THERE is one illustration of our superiority to our fathers which Senator HISCOCK omitted in his recent roasting of the vile pessimists who hold WASHINGTON'S political morality and the popular virtues of an earlier republican day to be worthy of contemplation and reproduction. The Senator could have said, without fear of challenge even from the most resolute pessimist, that the history of WASHINGTON'S time might be searched in vain to discover such general and ardent attention paid by the newspapers, as to an affair of immense and universal interest, to the progress across the country of two bruisers, openly defying the law without serious resistance upon the part of the law-officers, that in the presence of a great, lawless, brutal, and ignorant crowd they might beat each other to a bloody jelly.

If the newspaper public be justly estimated by the kind of news purveyed for it by many papers, the most hopeless pessimist would not deny that the space devoted to this ennobling incident reveals a state of the public mind which the epoch of WASHINGTON cannot parallel. It is a pity that the Fourth of July came just too soon for Senator HISCOCK to avail himself of the interesting contrast. Even Mr. MCMASTER, the diligent student of the earlier American newspaper, would doubtless own his inability to discover at the close of the last century any sign of such a state of the public taste as is disclosed by the head-lines and the fascinating details of description of this proud "sporting" event.

We trust that no pessimist will try to get his head out of chancery (in the pleasant phrase of the prize-ring), where it has been put by Senator HISCOCK, long enough to say that such prominence given to a disgusting and brutal incident is a national disgrace. Disgusting and brutal, indeed! We want no phariseeism of that kind. It is only the wretched and despicable holier-than-thou people who do not see in this noble mill and the keen interest with which the newspapers invest it a characteristic American regard for manly sport and honorable self-defence and healthful recreation. What can be more elevating than the tone of the assembly which gathers to witness the generous contest? What could illustrate more signally our advance upon the well-meaning but antiquated standards of public feeling in the slow days of WASHINGTON and JAY than the enthusiasm of excitement over this gratifying incident? What can be more puerile and effeminate and significant of the highest degree of British dudishness than the suggestion that such a performance and the interest in it are unmanly, inhuman, and revolting? As Mr. Joseph Surface would truly say, "the man who" presumes to think that certain characteristics of WASHINGTON'S time deserve our attentive consideration implies that some of our ways might be mended, and deserves, as a wicked pessimist, to be deprived of the privilege of reading a full and illustrated account of the great world's slugging match.

PERSONAL.

HON. EDMUND B. FAIRFIELD, D.D., LL.D., recently appointed by President HARRISON as Consul to Lyons, is a Virginian by birth, and a cousin of "Stonewall" JACKSON. He was early imbued with abolition principles, and graduated from Oberlin College in 1842. He was the first President of Hillsdale College, Michigan, a place which he held for twenty-one years. While occupying this position he was elected Lieutenant-Governor of the State. Several times he was candidate for Congress and for the United States Senate from Michigan, but his removal to Nebraska to become Chancellor of the State University took him out of the field of active politics. He returned to Michigan in 1882. He is an accomplished linguist in French, German, Portuguese, and Italian, besides being a classical scholar.

—MISS BEATRICE CAMERON, who personated Lady Anne in RICHARD MANSFIELD'S London production of *Richard III.*, has won many warm friends in England. She is now staying with the family of the Rev. WALTER CLARK, B.D., Head-master of Derby School, and will make a tour in Scotland with Mr. I. J. LYELL'S daughters before her return to America. She has put much of her personal charm and delicacy into her Lady Anne, which part she will play here in the autumn.

—The Yale crew have lost their stroke, E. L. CALDWELL, who, after studying in the theological school for two years, has determined to go into business. He stroked the university crew to victory in six races, three with Harvard, and his class crew in four races, making a better record, it is said, than that of any other college oarsman.

—Queen VICTORIA'S health seems to be failing. She has to be assisted by servants in entering or leaving her carriage, and uses a cane to support her while walking.

—CHARLES S. GILL, Belgian consul at Boston for the past fifteen years, has been decorated by his King, and made a Chevalier de l'Ordre de Leopold.

—Dr. DONLIN, interpreter of the General Sessions Court of this city, speaks eleven different languages fluently, and can make himself understood in several more. He has held his place, which is a non-political one, for over twenty years.

—General NEAL DOW has an invalid daughter at Nashua, New Hampshire, who has not been able to leave her chair for years, but in that time has mastered the French, German, Spanish, Russian, and Greek languages.

—The "Keeper of the Great Seal" of the United States is GEORGE BARTLE, who was appointed a clerk in the State Department by DANIEL WEBSTER forty-three years ago. Nothing but a formal warrant signed by the President will induce him to unlock the doors which guard the seal.

—The most elaborate dress in which the Shah of Persia arrays himself on state occasions is said to be worth about $1,000,000, the principal value being in the precious stones and other ornaments with which it is decked. English papers observe with interest that the Shah's manners have greatly improved since his former visit to that country in 1873. He is over sixty years old.

—THOMAS EWING SHERMAN, the eldest son of General SHERMAN, has been ordained as a Roman Catholic priest at Philadelphia. His father was not present at the ceremonies.

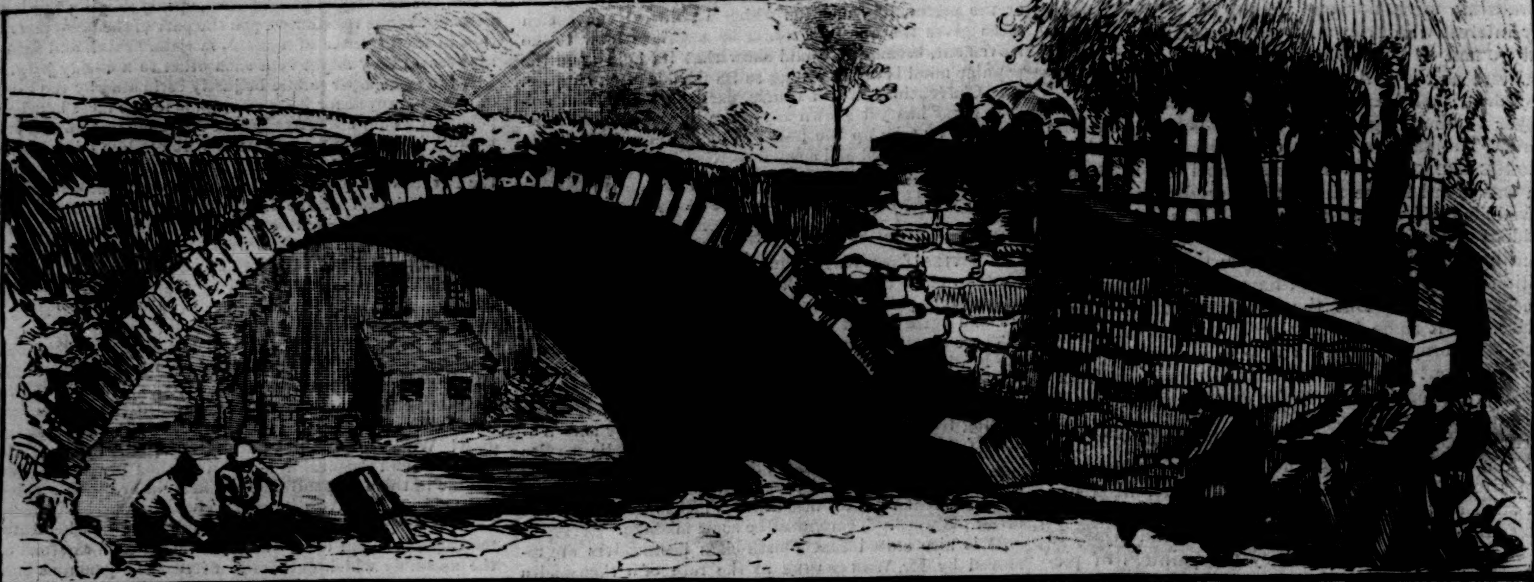
—The widow of Professor RICHARD A. PROCTOR, the astronomer, was left with but little property when yellow-fever carried off her husband, and has been forced to sell her Florida home, with the Professor's library and scientific apparatus.

—CHARLES RANDOLPH UNCLES, the first colored student to be ordained to the Catholic priesthood in this country, received the tonsure at the hands of Cardinal GIBBONS in Baltimore recently.

—Professor DAVID P. TODD, of the Amherst College Observatory, has been appointed chief of a government party of scientists to observe the total eclipse of the sun in southwestern Africa, December 22d.

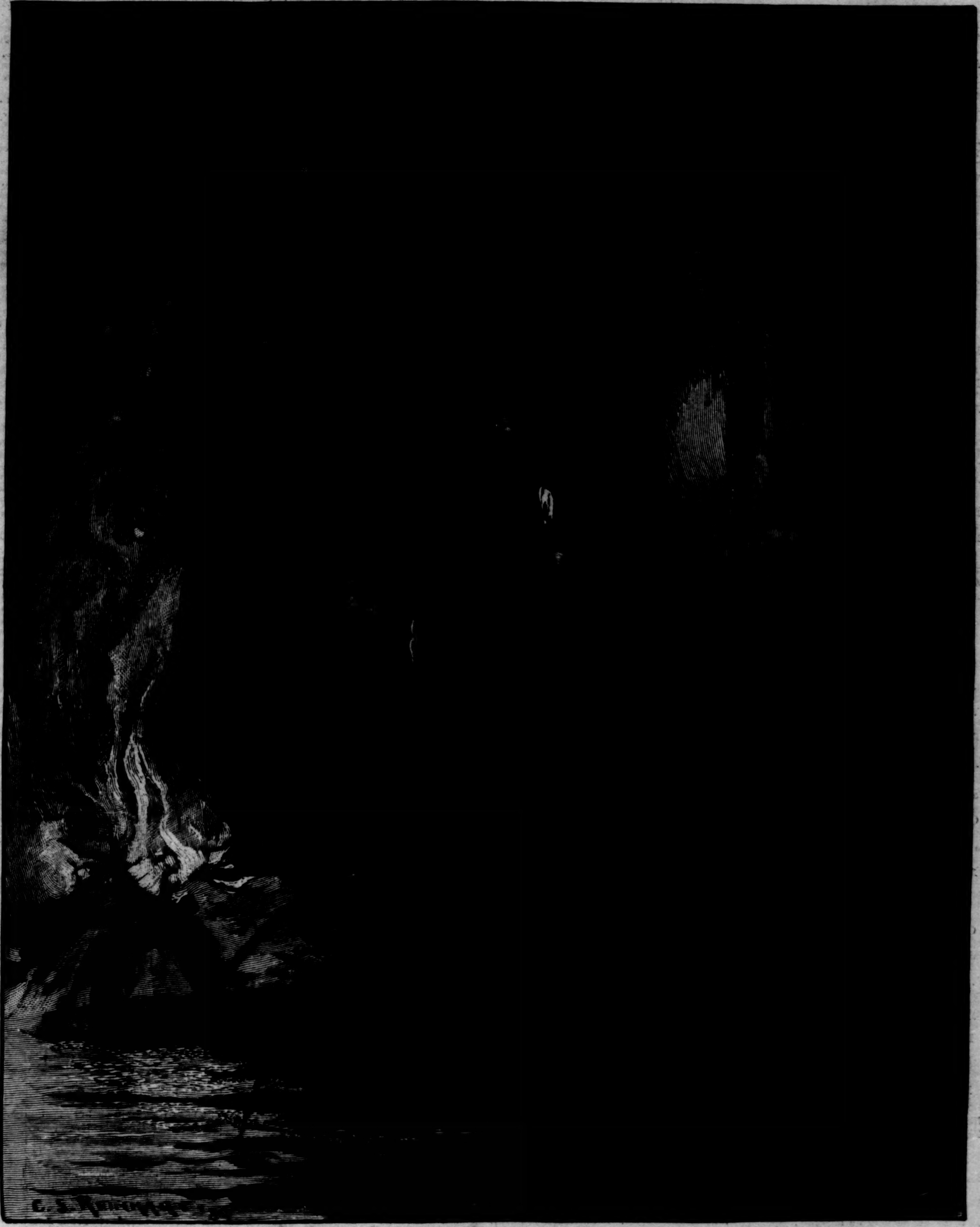
—WELLS GOODWIN, of Newbury Centre, Vermont, ninety-six years old, is a veteran of 1812, and loves to tell how he and his companions made the British run at Lundy's Lane. He enlisted when seventeen years old, and has drawn a pension of twelve dollars a month for many years. He is a Democrat of the old school, and has voted for every Democratic candidate for President from MONROE down.

—Captain NICHOLAS MURPHY, of Boston, is one of the most noted life-savers in this country. During a period of thirty-five years he has saved upward of one hundred persons from drowning, his first rescue being made when he was fourteen years old. For a number of years he followed the sea, but is at present a night-watchman at one of the wharves.



THE FATAL BRIDGE. THE BROKEN MILL-DAM.

THE DISASTER AT JOHNSTOWN, NEW YORK.—Drawn by W. A. Rogers.—[See Page 583.]



THROWING THE WANGA.

(ST. JOHN'S EVE.)

BY M. E. M. DAVIS.

SHRILL over dark blue Pontchartrain
It comes and goes, the weird refrain,
Wanga! wanga!

The trackless swamp is quick with cries
Of noisome things that dip and rise
On night-grown wings; and in the deep
Dark pools the monstrous forms that sleep
Inert by day uplift their heads.
The zela flower its poison sheds
Upon the warm and languorous air;
The lak-vine weaves its noxious snare;
The wide palmetto leaves are stirred
By venomed breathings, faintly heard
Across the still, star-lighted night.

Her lonely spice-fed fire, alight
Upon the black swamp's utmost rim,
Now spreads and flares, now smoulders dim;
And at her feet they curl and break,
The dark blue waters of the lake.

Her arms are wild above her head—
Old withered arms, whose charm has fled.

Zizi, Creole Zizi,
You is slim an' straight ez a saplin'
Dat grows by de bayou's aidge;
You is brown an' sleek ez a young Bob White
Whar hides in de yaller sedge.

Yo' eyes is black an' shiny,
An' quick ez de lightnin' flash;
You wuz bawn in de time er freedom,
An' never is felt de lash.
—Me, I kin th'ow wanga!

Her dusky face is wracked and seamed,
That once like ebon marble gleamed.

Zizi, Creole Zizi,
You is spry on yo' foot ez de jay-bird
Whar totes de debble his san';
You kin tole de buckra to yo' side
By de turnin' o' yo' han'.

Yo' ways is sweet ez de sugar
You puts in yo' *pralines*,
When de orange flower on de banquette draps,
An' de pistache-nut is green.
—Me, I kin th'ow wanga!

Her knotted shoulders, brown and bare,
The deathless scars of slavehood wear.

Zizi, Creole Zizi,
You is crope lak a thieft to de do'-yard
When de moon wuz shinin' high,
An' you stole de ole man' heart erway
Wid de laughin' in yo' eye.

My ole man!—de chillun's daddy!—
We is hoed de cotton row
An' shucked de corn-shuck side by side
Fer forty year an' mo'!
—Me, I kin th'ow wanga!

The flames that leap about her feet
Burn with a perfume strange and sweet.

Zizi, Creole Zizi,
Twis' yo'se'f in de coonjine
Lak a moccasin in de slime;
Twis' yo'se'f when de fiddle talks
Fer de las' endurin' time.

Den was'e ter de bone in de midnight,
In de mawnin' was'e erway;
Bu'n wid heat in de winter-time,
An' shiver de hottes' day—
Wanga! wanga!

Onder yo' fla'ntin' *tignon*
De red-hot beetles crawl,
Wid claws dat sco'ch inter de meat,
An' mek de blood-draps fall!

Over yo' bed de screech-owl
In de midnight screech an' cry!
Den kiver yo' head, Creole Zizi—
Den kiver yo' head an' die—
Wanga! wanga!

Her voice is hushed, she crouches low
Above the embers' flickering glow.
The swamp-wind wakes, and many a thing
Unnamed flits by on furry wing;
They brush her cheeks unfelt; she hears
The far-off songs of other years.

Her eyes grow tender as she sways
And croons above the dying blaze.

Oh, de cabin at de quarter in de old plantation days,
Wid de garden patch behin' it an' de gode-vine by de do',
An' de do'-yard sot wid roses, whar de chillun runs and plays,
An' de streak o' sunshine, yaller lak, er-slantin' on de flo'!

We wuz young an' lakly niggers when de ole man fotch me home.
Ole Mis' she gin de weddin', an' young Mis' she dress de bride!
He say he gwineter love me twel de time o' kingdom come,
An' forty year an' uperds we is trabble side by side!

But ole Mars' wuz killed at Shiloh, an' young Mars' at Wilderness;
Ole Mis' is in de graveyard, wid young Mis' by her side,
An' all er we-all's fambly is scattered eas' an' wes,'
An' de gode-vine by de cabin do' an' de roses all has died!

My chillun dey is scattered too, an' some is onder groun'.
Hit wuz forty year an' uperds we is trabble, him an me!
Ole Mis', whar is de glory o' de freedom I is foun'?
De ole man he is lef' me fer de young eyes o' Zizi!

Her arms are wild above her head,
The softness from her voice has fled.

Zizi, Creole Zizi,
Twis' yo'se'f in de coonjine
Lak a moccasin in de slime;
Kunjur de ole man wid yo' eye
Fer de las' endurin' time!

Den cry an' mo'n in de mawnin',
In de midnight mo'n an' cry,
Twel de debble has you, han' an' foot,
Den stretch yo'se'f an' die!—
Wanga! wanga!

A HAZARD OF NEW FORTUNES.*

BY WILLIAM DEAN HOWELLS.

PART THIRD.

III.

That night Dryfoos was wakened from his after-dinner nap by the sound of gay talk and nervous giggling in the drawing-room. The talk, which was Christine's, and the giggling, which was Mela's, were intershot with the heavier tones of a man's voice; and Dryfoos lay awhile on the leathern lounge in his library, trying to make out whether he knew the voice. His wife sat in a deep chair before the fire, with her eyes on his face, waiting for him to wake.

* Begun in Harper's Weekly No. 1688.

"Who is that, out there?" he asked, without opening his eyes.

"Indeed, indeed I don't know, Jacob," his wife answered. "I reckon it's just some visitor of the girls."

"Was I snoring?"

"Not a bit. You was sleeping as quiet! I did hate to have 'em wake you, and I was just going out to shoo them. They've been playing something, and that made them laugh."

"I didn't know but I had snored," said the old man, sitting up.

"No," said his wife. Then she asked, wistfully, "Was you out at the old place, Jacob?"

"Yes."

"Did it look natural?"

"Yes; mostly. They're sinking the wells down in the woods pasture."

"And—the childern's graves?"

"They haven't touched that part. But I reckon we got to have 'em moved to the cemetery. I bought a lot."

The old woman began softly to weep. "It does seem too hard that they can't be let to rest in peace, poor little things. I wanted you and me to lay there too, when our time come, Jacob. Just there, back o' the beehives, and under them shoomakes—my, I can see the very place! And I don't believe I'll ever feel at home anywheres else. I woon't know where I am when the trumpet sounds. I have to think before I can tell where the east is in New York; and what if I should git faced the wrong way when I raise? Jacob, I wonder you could sell it!" Her head shook, and the fire-light shone on her tears, as she searched the folds of her dress for her pocket.

A peal of laughter came from the drawing-room, and then the sound of chords struck on the piano.

"Hush! Don't you cry, 'Liz'beth!" said Dryfoos. "Here; take my handkerchief. I've got a nice lot in the cemetery, and I'm goin' to have a monument, with two lambs on it—like the one you always liked so much. It ain't the fashion, any more, to have family buryin'-grounds; they're collectin' 'em into the cemeteries, all round."

"I reckon I got to bear it," said his wife, muffling her face in his handkerchief. "And I suppose the Lord kin find me, wherever I am. But I always did want to lay just there. You mind how we used to go out and set there, after milkin', and watch the sun go down, and talk about where their angels was, and try to figger it out?"

"I remember, 'Liz'beth."

The man's voice in the drawing-room sang a snatch of French song, insolent, mocking, salient; and then Christine's attempted the same strain, and another cry of laughter from Mela followed.

"Well, I always did expect to lay there. But I reckon it's all right. It won't be a great while, now, anyway. Jacob, I don't believe I'm a-goin' to live very long. I know it don't agree with me, here."

"Oh, I guess it does, 'Liz'beth. You're just a little pulled down with the weather. It's coming spring, and you feel it; but the doctor says you're all right. I stopped in, on the way up; and he says so."

"I reckon he don't know everything," the old woman persisted. "I've been runnin' down ever since we left Moffitt, and I didn't feel any too well there, even. It's a very strange thing, Jacob, that the richer you git, the less you ain't able to stay where you want to, dead or alive."

"It's for the children we do it," said Dryfoos. "We got to give them their chance in the world."

"Oh, the world! They ought to bear the yoke in their youth, like we done. I know it's what Coonrod would like to do."

Dryfoos got upon his feet. "If Coonrod 'll mind his own business, and do what I want him to, he'll have yoke enough to bear." He moved from his wife, without further effort to comfort her, and pottered heavily out into the dining-room. Beyond its obscurity stretched the glitter of the deep drawing-room. His feet, in their broad, flat slippers, made no sound on the dense carpet, and he came unseen upon the little group there near the piano. Mela perched upon the stool with her back to the keys, and Beaton bent over Christine, who sat with a banjo in her lap, letting him take her hands and put them in the right place on the instrument. Her face was radiant with happiness, and Mela was watching her with foolish, unselfish pleasure in her bliss.

There was nothing wrong in the affair to a man of Dryfoos's traditions and perceptions, and if it had been at home in the farm sitting-room, or even in his parlor at Moffitt, he would not have minded a young man's placing his daughter's hands on a banjo, or even holding them there; it would have seemed a proper attention from him if he was courting her. But here, in such a house as this, with the daughter of a man who had made as much money as he had, he did not know but it was a liberty. He felt the angry doubt of it which beset him in regard to so many experiences of his changed life; he wanted to show his sense of it, if it was a liberty, but he did not know how, and he did not know that it was so. Besides, he could not help a touch of the pleasure in Christine's happiness which Mela showed; and he would have gone back to the library, if he could, without being discovered.

But Beaton had seen him, and Dryfoos, with a nonchalant nod to the young man, came forward. "What you got there, Christine?"

"A banjo," said the girl, blushing in her father's presence.

Mela gurgled, "Mr. Beaton is learnun' her the first position."

Beaton was not embarrassed. He was in evening dress, and his face, pointed with its brown beard, showed extremely handsome above the expanse of his broad white shirt front. He gave back as nonchalant a nod as he had got, and without further greeting to Dryfoos, he said to Christine: "No, no. You must keep your hand and arm so." He held them in position. "There! Now strike with your right hand. See?"

"I don't believe I can ever learn," said the girl, with a fond upward look at him.

"Oh yes, you can," said Beaton.

They both ignored Dryfoos in the little play of protests which followed, and he said, half jocosely, half suspiciously, "And is the banjo the fashion, now?" He remembered it as the emblem of low-down show business, and associated it with end-men, and blackened faces, and grotesque shirt collars.

"It's all the rage," Mela shouted in answer for all. "Everybody plays it. Mr. Beaton borrowed this from a lady friend of his."

"Humph! Pity I got you a piano, then," said Dryfoos. "A banjo would have been cheaper."

Beaton so far admitted him to the conversation as to seem reminded of the piano by his mentioning it. He said to Mela, "Oh, won't you just strike those chords?" and as Mela wheeled about and beat the keys, he took the banjo from Christine and sat down with it. "This way!" He strummed it, and murmured the tune Dryfoos had heard him singing from the library, while he kept his beautiful eyes floating on Christine's. "You try that, now; it's very simple."

"Where is Mrs. Mandel?" Dryfoos demanded, trying to assert himself.

Neither of the girls seemed to have heard him at first in the chatter they broke into over what Beaton proposed. Then Mela said, absently, "Oh, she had to go out to see one of her friends that's sick," and she struck the piano keys. "Come; try it, Chris!"

Dryfoos turned about unheeded, and went back to the library. He would have liked to put Beaton out of his house, and in his heart he burned against him as a contumacious hand; he would have liked to discharge him from the art department of *Every Other Week* at once. But he was aware of not having treated Beaton with much ceremony, and if the young man had returned his behavior in kind, with an electrical response to his own feeling, had he any right to complain? After all, there was no harm in his teaching Christine the banjo.

His wife still sat looking into the fire. "I can't see," she said, "as we've got a bit more comfort of our lives, Jacob, because we've got such piles and piles of money. I wisht to gracious we was back on the farm this minute. I wisht you had held out against the childern about sellin' it; 'twould 'a bin the best thing fur 'em, I say. I believe in my soul they'll git spoiled, here in New York. I kin see a change in 'em a'ready—in the girls."

Dryfoos stretched himself on the lounge again. "I can't see as Coonrad is much comfort, either. Why ain't he here with his sisters? What does all that work of his on the East side amount to? It seems as if he done it to cross me, as much as anything." Dryfoos complained to his wife on the basis of mere affectional habit, which in married life often survives the sense of intellectual equality. He did not expect her to reason with him, but there was help in her listening, and though she could only soothe his fretfulness with soft answers which were often wide of the purpose, he still went to her for solace. "Here, I've gone into this newspaper business, or whatever it is, on his account, and he don't seem any more satisfied than ever. I can see he hain't got his heart in it."

"The poor boy tries; I know he does, Jacob; and he wants to please you. But he give up a good deal when he give up bein' a preacher; I s'pose we ought to remember that."

"A preacher!" sneered Dryfoos. "I reckon bein' a preacher wouldn't satisfy him now. He had the impudence to tell me this afternoon that he would like to be a *priest*; and he threw it up to me that he never could be, because I'd kept him from studyin'."

"He don't mean a Catholic priest—not a Roman one, Jacob," the old woman explained, wistfully. "He's told me all about it. They ain't the kind o' Catholics we been used to; some sort of 'Piscopalians; and they do a heap o' good amongst the poor folks over there. He says we ain't got any idea how folks lives in them tenement-houses, hunderds of 'em in one house, and whole families in a room; and it burns in his heart to help 'em like them Fathers, as he calls 'em, that gives their lives to it. He can't be a Father, he says, because he can't git the eddication, now; but he can be a Brother; and I can't find a word to say ag'inst it, when he gits talkin', Jacob."

"I ain't saying anything against his priests, 'Liz'beth," said Dryfoos. "They're all well enough in their way; they've given up their lives to it, and it's a matter of business with them, like any other. But what I'm talking about now, is Coonrad. I don't object to his doin' all the charity he wants to, and the Lord knows I've never been stingy with him about it. He might have all the money he wants, to give round any way he pleases."

"That's what I told him once, but he says money ain't the thing—or not the only thing you got to give to them poor folks. You got to give your time, and your knowledge, and your love—I don't know what all—you got to give *yourself*, if you expect to help 'em. That's what Coonrad says."

"Well, I can tell him that charity begins at home," said Dryfoos, sitting up, in his impatience. "And he'd better give himself to *us* a little—to his old father and mother. And his sisters. What's he doin' goin' off there, to his meetings, and I don't know what all, an' leavin' them here alone?"

"Why, ain't Mr. Beaton with 'em?" asked the old woman. "I thought I heared his voice."

"Mr. Beaton! Of course, he is! And who's Mr. Beaton, anyway?"

"Why, ain't he one of the men in Coonrad's office? I thought I heared—"

"Yes, he is! But *who* is he? What's he doing round here? Is he makin' up to Christine?"

"I reckon he is. From Mely's talk, she's about crazy over the fellow. Don't you like him, Jacob?"

"I don't know him, or what he is. He hasn't got any manners. Who brought him here? How'd he come to come, in the first place?"

"Mr. Fulkerson brung him, I believe," said the old woman, patiently.

"Fulkerson!" Dryfoos snorted. "Where's Mrs. Mandel, I should like to know? He brought *her*, too. Does she go traipsin' off this way, every evening?"

"No; she seems to be here pretty regular most o' the time. I don't know how we could ever git along without her, Jacob; she seems to know just what to do, and the girls would be ten times as outbreakin' without her. I hope you ain't thinkin' o' turnin' her off, Jacob?"

Dryfoos did not think it necessary to answer such a question. "It's all Fulkerson, Fulkerson, Fulkerson. It seems to me that Fulkerson about runs this family. He brought Mrs. Mandel, and he brought that Beaton, and he brought that Boston fellow! I guess I give *him* a dose, though; and I'll learn Fulkerson that he can't have everything his own way. I don't want anybody to help me spend my money. I made it, and I can manage it. I guess Mr. Fulkerson can bear a little watching, now. He's been travelling pretty free, and he's got the notion he's driving, maybe. I'm a-going to look after that book a little myself."

"You'll kill yourself, Jacob," said his wife, "trying to do so many things. And what is it all fur? I don't see as we're better off, any, for all the money. It's just as much care as it used to be when we was all there on the farm together. I wisht we could go back, Ja—"

"We *can't* go back!" shouted the old man, fiercely. "There's no farm any more to go back to. The fields is full of gas wells and oil wells and hell holes generally; the house is tore down, and the barn's goin'—"

"The *barn!*" gasped the old woman. "Oh, my!"

"If I was to give all I'm worth this minute, we couldn't go back to the farm, any more than them girls in there could go back and be little children. I don't say we're any better off, for the money. I've got more of it now than I ever had; and there's no end to the luck; it pours in. But I feel like I was tied hand and foot. I don't know which way to move; I don't know what's best to do about anything. The money don't seem to buy anything but more and more care and trouble. We got a big house that we ain't at home in; and we got a lot of hired girls round under our feet that hinder and don't help. Our children don't mind us, and we got no friends or neighbors. But it had to be. I couldn't help but sell the farm, and we can't go back to it, for it ain't there. So don't you say anything more about it, Liz'beth!"

"Pore Jacob!" said his wife. "Well, I woon't, dear."

IV.

It was clear to Beaton that Dryfoos distrusted him; and the fact heightened his pleasure in Christine's liking for him. He was as sure of this as he was of the other, though he was not so sure of any reason for his pleasure in it. She had her charm; the charm of wildness to which a certain wildness in himself responded; and there were times when his fancy contrived a common future for them, which would have a prosperity forced from the old fellow's love of the girl. Beaton liked the idea of this compulsion better than he liked the idea of the money; there was something a little repulsive in that; he imagined himself rejecting it; he almost wished he was enough in love with the girl to marry her without it; that would be fine. He was taken with her in a certain measure, in a certain way; the question was in what measure, in what way.

It was partly to escape from this question that he hurried down-town, and decided to spend with the Leightons the hour remaining on his hands before it was time to go to the reception for which he was dressed. It seemed to him important that he should see Alma Leighton. After all, it was her charm that was most abiding with him; perhaps it was to be final. He found himself very happy in his present relations with her. She had dropped that barrier of pretences and ironical surprise. It seemed to him that they had gone back to that old ground of common artistic interest which he had found so pleasant the summer before. Apparently she and her mother had both forgiven his neglect of them in the first months of their stay in New York; he was sure that Mrs. Leighton liked him as well as ever, and if there was still something a little provisional in Alma's manner at times, it was something that piqued more than it discouraged; it made him curious, not anxious.

He found the young ladies with Fulkerson when he rang. He seemed to be amusing them both, and they were both amused beyond the merit of so small a pleasantry, Beaton thought, when Fulkerson said, "Introduce myself, Mr. Beaton: Mr. Fulkerson, of *Every Other Week*. Think I've met you at our place." The girls laughed, and Alma explained that her mother was not very well, and would be sorry not to see him. Then she turned, as he felt, perversely, and went on talking with Fulkerson, and left him to Miss Woodburn.

She finally recognized his disappointment: "Ah don't often get a chance at you, Mr. Beaton, and Ahm just goin' to toak yo' to death. Yo' have been Sowth yo'self, and yo' know ho' we *do* toak."

"I've survived to say yes," Beaton admitted.

"Oh, now, *do* you think we toak so much mo' than you do in the No'th?" the young lady deprecated.

"I don't know. I only know you can't talk too much for me. I should like to hear you say *Soath* and *ho'se* and *aboat* for the rest of my life."

"That's what Ah call raght personal, Mr. Beaton. Now Ahm goin' to be personal, too." Miss Woodburn flung out over her lap the square of cloth she was embroidering, and asked him, "Don't you think that's beautiful? Now, as an awtust—a *great* awtust?"

"As a *great* awtust, yes," said Beaton, mimicking her accent. "If I were less than great I might have something to say about the arrangement of colors. You're as bold and original as Nature."

"Really? Oh, now, do tell me yo' favo'ite colo', Mr. Beaton."

"My favorite color? Bless my soul, why should I prefer any? Is blue good, or red wicked? Do people have favorite colors?" Beaton found himself suddenly interested.

"Of co'se they do," answered the girl. "Don't awtusts?"

"I never heard of one that had—consciously."

"Is it possible? I supposed they all had. Now *mah* favo'ite colo' is gawnet. Don't you think it's a pretty colo'?"

"It depends upon how it's used. Do you mean in neckties?" Beaton stole a glance at the one Fulkerson was wearing.

Miss Woodburn laughed with her face bowed upon her wrist. "Ah do think you gentlemen in the No'th awe ten tahms as lahvely as the ladies."

"Strange," said Beaton. "In the South—Soath, excuse me!—I made the observation that the ladies were ten times as lively as the gentlemen. What is that you're working?"

"This?" Miss Woodburn gave it another flirt, and looked at it with a glance of dawning recognition. "Oh, this is a table covah. Wouldn't you lahke to see where it's to go?"

"Why, certainly."

"Well, if you'll be raght good I'll let yo' give me some professional advass aboat putting something in the co'ners or not, when you have seen it on the table."

She rose and led the way into the other room. Beaton knew she wanted to talk with him about something; but he waited patiently to let her play her comedy out. She spread the cover on the table, and he advised her, as he saw she wished, against putting anything in the corners; just run a line of her stitch around the edge, he said.

"Mr. Fulkerson and Ah, why we've been having a regular faght aboat it," she commented. "But we both agreed, fahnally, to leave it to you; Mr. Fulkerson said you'd be sure to be raght. Ah'm *so* glad you took mah sahde. But he's a great admahrer of yours, Mr. Beaton," she concluded, demurely, suggestively.

"Is he? Well, I'm a great admirer of Fulkerson's," said Beaton, with a capricious willingness to humor her wish to talk about Fulkerson. "He's a capital fellow; generous, magnanimous, with quite an ideal of friendship, and an eye single to the main chance all the time. He would advertise *Every Other Week* on his family vault."

Miss Woodburn laughed, and said she should tell him what Beaton had said.

"Do. But he's used to defamation from me, and he'll think you're joking."

"Ah suppose," said Miss Woodburn, "that he's quahte the tahpe of a New York business man." She added, as if it followed logically, "He's so different from what I thought a New York business man would be."

"It's your Virginia tradition to despise business," said Beaton, rudely.

Miss Woodburn laughed again. "*Despahse* it? Mah goodness! we want to get *into* it, and 'work it fo' all it's wo'th,' as Mr. Fulkerson says. That tradition is all past. You don't know what the Soath is now. Ah suppose mah fathaw despahses business, but he's a tradition himself, as Ah tell him." Beaton would have enjoyed joining the young lady in anything she might be going to say in derogation of her father, but he restrained himself, and she went on more and more as if she wished to account for her father's habitual hauteur with Beaton, if not to excuse it. "Ah tell him he don't understand the rising generation. He was brought up in the old school, and he thinks we're all just lahke he was when he was young, with all those ahdeals of chivalry and family; but mah goodness! it's money that cyoants no'adays in the Soath, just lahke it does everywhere else. Ah suppose, if we could have slavery back in the fawm mah fathaw thinks it could have been brought up to, when the commercial spirit wouldn't let it alone, it would be the best thing; but we can't have it back, and Ah tell him we had better have the commercial spirit, as the next best thing."

Miss Woodburn went on, with sufficient loyalty and piety, to expose the difference of her own and her father's ideals, but with what Beaton thought less reference to his own unsympathetic attention than to a knowledge finally of the *personnel* and *materiel* of *Every Other Week*, and Mr. Fulkerson's relation to the enterprise. "You *most* excuse my asking so many questions, Mr. Beaton. You know it's all *mah* doing that we awe heah in New York. Ah just told my fathaw that if he was evah goin' to do anything with his wrahtings, he had got to come No'th, and Ah *made* him come. Ah believe he'd have staid in the Soath all his lahfe. And now Mr. Fulkerson wants him to let his editor see some of his wrahtings, and Ah wanted to know something aboat the magazine. We awe a great deal excited aboat it in this ho'se, you know, Mr. Beaton," she concluded, with a look that now transferred the interest from Fulkerson to Alma. She led the way back to the room where they were sitting, and went up to triumph over Fulkerson with Beaton's decision about the table cover.

Alma was left with Beaton near the piano, and he began to talk about the Dryfooses, as he sat down on the piano stool. He said he had been giving Miss Dryfoos a lesson on the banjo; he had borrowed the banjo of Miss Vance. Then he struck the chord he had been trying to teach Christine, and played over the air he had sung.

"How do you like that?" he asked, whirling round.

"It seems rather a disrespectful little tune, somehow," said Alma, placidly.

Beaton rested his elbow on the corner of the piano, and gazed dreamily at her. "Your perceptions are wonderful. It *is* disrespectful. I played it, up there, because I felt disrespectful to them."

"Do you claim that as a merit?"

"No, I state it as a fact. How can you respect such people?"

"You might respect yourself, then," said the girl. "Or perhaps that wouldn't be so easy, either."

"No; it wouldn't. I like to have you say these things to me," said Beaton, impartially.

"Well, I like to say them," Alma returned.

"They do me good."

"Oh, I don't know that that was my motive."

"There is no one like you—no one," said Beaton, as if apostrophizing her in her absence. "To come from that house, with its assertions of money—you can hear it chink, you can smell the foul old bank-notes; it stifles me—into an atmosphere like this, is like coming into another world."

"Thank you," said Alma. "I'm glad there isn't that unpleasant odor here; but I wish there was a little more of the chinking."

"No, no! Don't say that!" he implored. "I like to think that there is one soul uncontaminated by the sense of money in this big, brutal, sordid city."

"You mean two," said Alma, with modesty. "But if you stifle at the Dryfooses', why do you go there?"

"Why do I go?" he mused. "Don't you believe in knowing all the natures, the types, you can? These girls are a strange study: the young one is a simple, earthly creature, as common as an oat field; and the other a sort of sylvan life: fierce, flashing, feline—"

Alma burst out into a laugh. "What apt alliteration! And do they like being studied? I should think the sylvan life might—scratch."

"No," said Beaton, with melancholy absence; "it only—purrs."

The girl felt a rising indignation. "Well, then, Mr. Beaton; I should hope it *would* scratch, and bite, too. I think you've no business to go about studying people, as you do. It's abominable."

"Go on," said the young man. "That Puritan conscience of yours! It appeals to the old Covenanter strain in me—like a voice of pre-existence. Go on—"

"Oh, if I went on I should merely say it was not only abominable, but contemptible."

"You could be my guardian angel, Alma," said the young man, making his eyes more and more slumbrous and dreamy.

"Stuff! I hope I have a soul *above* buttons!" He smiled, as she rose, and followed her across the room. "Good-night, Mr. Beaton," she said.

Miss Woodburn and Fulkerson came in from the other room. "What! You're not going, Beaton?"

"Yes; I'm going to a reception. I stopped in on my way."

"To kill time," Alma explained.

"Well," said Fulkerson, gallantly, "this is the last place I should like to do it. But I guess I'd better be going, too. It has sometimes occurred to me that there is such a thing as staying too late. But with Brother Beaton, here, just starting in for an evening's amusement, it does seem a little early yet. Can't you urge me to stay, somebody?"

The two girls laughed, and Miss Woodburn said, "Mr. Beaton is such a butterfly of fashion! Ah wish *Ah* was on mah way to a pawty. Ah feel quahte envious."

"But he didn't say it to *make* you," Alma explained with meek softness.

"Well, we can't all be swells. Where is your party, anyway, Beaton?" asked Fulkerson. "How do you manage to get your invitations to these things? I suppose a fellow has to keep hinting round pretty lively, heigh?"

Beaton took these mockeries serenely, and shook hands with Miss Woodburn, with the effect of having already shaken hands with Alma. She stood with hers clasped behind her.

[TO BE CONTINUED.]

THE DELAGOA BAY INCIDENT.

The trouble that has arisen between England and Portugal, of which so much has been said in recent cable despatches to the newspapers, grows out of the competition between the English, the Portuguese, and the Dutch for the control of the shortest line of communication between the sea and the rich gold and other mineral districts of South Africa. The actual bone of contention is the Lourenzo Marquez (Delagoa Bay) and Transvaal Railway, a line about fifty-two miles in length, running across Portuguese territory from Delagoa Bay to the frontier of the Transvaal Republic. Short as it is, this railway is of vast importance, present and prospective, to the commercial world, commanding as it does the only good harbor in a stretch of about two thousand miles on the east coast of Africa.

Near its western terminus are the principal gold-producing districts of the Transvaal, which has been pronounced a second Ophir in mineral resources, embracing inexhaustible beds of iron, coal, and copper. In course of time it must make Delagoa Bay a great coaling station for Africa, Australia, and the East Indies, available in that respect to every nation whose ships sail the seas. On this point the Journal of the Royal Geographical Society at Halifax says, "The whole of the southeastern part of the Transvaal is one extensive coal-field." Bechuana-land, to which also this railroad smooths the way, is an English possession divided into farms for English settlers. It lies to the west and the north of the Transvaal, and comprises a territory larger than Spain, rich in minerals, and noted for its fine climate and luxuriant vegetation. The road from this country *viâ* the Delagoa Bay to deep water is several hundred miles shorter than any other. Besides the white population, which is constantly swollen by English, German, Australian, and American immigration, there is in these countries a black population variously estimated at from thirty to forty millions, all of which must be, in the fulness of time, tributary to the Delagoa Bay Railway.

The Portuguese government owns the strip of land across which the Delagoa Bay Railway is built. American enterprise and American and English money built it. Its construction was desired long before the way was found, but the difficulties seemed insurmountable. The financiers of England, France, and Germany declined to have anything to do with so hazardous a scheme. American pluck, however, was equal to the emergency. Eight years ago Colonel Edward McMurdo, an American temporarily residing in London, became convinced that the gold-fields of South Africa were richer than the world suspected, and that the time had come to tap them for the benefit of civilization. He foresaw the inevitable influx of immigration and the means of its promotion, and believed that the geographical advantages of Lourenzo Marquez, as the Portuguese call Delagoa Bay, made it the key of the situation. After a full survey of the field and all of the circumstances, he asked of the Portuguese government a concession to build a railway from Lourenzo Marquez to the frontier, the understanding being that the Transvaal government stood ready with plans for the extension of the line through the heart, and would make a concession for that purpose to a company organized in the Netherlands, and known as the Netherlands Transvaal Railway. On December 14, 1883, Colonel McMurdo obtained his concession. The terms were thoroughly matured on both sides. The Portuguese government obtained the railway essential for the maintenance of its position on the east coast of Africa and to secure its full share of the rich harvest awaiting gleaning. The arrangement also yielded to the government five per cent. of the dividend distributed to the shareholders, reduced fares for military men and seamen, gratis carriage of government employés and mails, the free use of the company's electric telegraph and extra wires for special service, the right to redeem the concession after the lapse of thirty-five years, and the absolute ownership of the property at the expiration of ninety-nine years. On the other hand, the concessionaire was given a positive assurance that no parallel railway should be constructed within sixty miles on either side of it; 250,000 acres of land, by him to be selected, in the districts of Lourenzo Marquez and Inhambane; land in alternate blocks on both sides of the railway to the amount of 10,000 acres, with the accompanying mineral rights; a free right of way through government lands; a square kilometre of land in Delagoa Bay Harbor; land on an island in the bay for warehouses, depots, etc.; exemption of the railway from any special tax; the admission of all articles for construction and use of the railway free of duty for fifteen years; the right to cut timber from government forests; and the right to regulate the tariffs of the company was vested in the board of directors of the company when organized. It was stipulated that the company building the railway should be organized under the laws of Portugal, and that the line should be constructed on plans provided by the Portuguese engineers, minute specifications being made as to route, foundation, equipment, etc. Fifteen thousand pounds were to be deposited as caution money, and the concessionaire was bound to the building of the road within three years.

The concessionaire fulfilled his contract under most trying conditions. Capital from the first suspected bad faith on the part of the Portuguese; the millions of English money already invested at Natal were jealously antagonistic to the enterprise; the Transvaal government threw every available obstacle in the way, and it was with the utmost difficulty that competent engineers were induced to risk their lives in making the preliminary surveys in the malarious and pestilence-breeding country through which lay the path to the ore-producing mountains. Within the specified time, however, the road was built, but at an expense of £25,000 in excess of the estimates. New complications arose when the Portuguese came forward with the extraordinary demand that the company should build nine kilometres further to a new alleged frontier, and that within a certain period, covering a season when railway building in a tropical country is a physical impossibility. The failure to meet this requirement—a requirement not contemplated by the original concession or by any agreement between the contracting parties—led to the attempt of the Portuguese on the 24th of June to cancel the concession and seize the railroad as forfeit to the government.

This action was taken in face of protest, or polite request from Great Britain and the United States, through the Foreign Office in London and the State Department in Washington. It was followed by the dispatch of English gun-boats to Delagoa Bay, and by the filing in Washington of a claim of damages to the amount of £750,000 by the widow of the American concessionaire. Colonel McMurdo himself died only six weeks before the Portuguese proceeded to extreme measures to carry their point, and his sudden death is attributed to the threat that such action would be taken. The probability is, according to the latest advices from Lisbon and London, that Portugal will beat a retreat before British demands, and agree to a settlement by arbitration.

QUATRAINS.

I.—PATIENCE.

Only heroic patience and sublime
Through cark and care can make the victory ours:
The humble vine in storm and dark must climb
Ere it be crowned with flowers.

II.—STORM AND CALM.

Great sullen clouds the western heavens pile,
And thunder rumbles through those seas of jet;
But o'er it all the skies serenely smile,
Blue as the bosom of a violet.

R. K. Munkittrick.

DO TAKE US TO PARIS, PAPA!

Seven! What a lucky, mysterious figure that is, fraught with numerical potentialities, eccentricities, idiosyncrasies of its own, but obstinate, indivisible! If you were an equitable parent blessed with seven daughters (and there must be many such), as a happy father you could not say, "Three and a half of you go to Saratoga, the other three and a half to Newport." Harsh, even unjust, would it be for that sire to say, "Three to Narragansett Pier, three more to the White Mountains, and one of you stay home. That settles it."

The mother of this pretty bevy may or may not have had her trials with these seven daughters. She may have thought more than once over some wholesale method of decking them, but then has shuddered at the idea of heading a procession uniformed like the inmates of a parochial school or an orphanage. The variety of complexions, shades of hair, differences of size, always insisted on a special apparel assorted to the wearer.

Considering the subject alphabetically, if Alice, Bertha, Clara, Daisy, Eugenia, Fanny, Gertrude, do what their mother might, how many problems she had to solve! But when it came to that time when a change of air was absolutely necessary (for, though Eugenia was stronger this spring than she had been, Daisy was by no means up to her former standard), and a move was in the air, when this graver subject of an exodus was mooted, mamma apparently washed her hands of it. "Your father, my dears, will decide for us." Dear good woman! as if she would not watch carefully on which side was the majority, and how ready she would be to join with it; for be it known, when there are seven daughters in a house, no matter what may be their age, the father very properly is in the minority.

So in Mr. Smedley's happy sketch the girls have held a preliminary caucus, and very cleverly they have managed it. You can see at a glance that this little battalion is of one mind, and equipped with happy wiles and cajoleries. They have at once agreed on a leader and a lieutenant. Very judicious has been the choice. Alice (why disclose her age?), she is the eldest, but Fanny and Gertrude are the youngest. "Now, mind," Alice had said to Fanny and Gertrude—"now, little girls, do just as I tell you. Gertrude, you close with papa and kiss him; and if he looks glum, kiss him again. And you, Fanny, take a chair right opposite to him, and look at him imploringly, and don't you budge from there. Fanny, I need not instruct you. You are a natural wheedler. Be ever so sweet and taking. As for the rest of us, don't think we won't back you up. Now listen. I propose a higher flight this time than you ever dreamt of. It's Paris. We have—that is, Bertha, Clara, Daisy, Eugenia—laid it all out. Oh! mamma; she is with us, of course. Question of expense? Oh, now, really it will not come to so very much more than if we went to Saratoga. It must be done—adroitly, simultaneously. Don't you all talk at once at papa. Each one can have her turn. Dear old papa! He will have to give in; but so much depends on opening the business properly. Now, 'mademoiselles, *en place*,' and don't some of you forget to bring in the great advantages of acquiring the most necessary of all languages, which is French. Don't for your lives talk dresses and things. Say we are prepared to go just as we are. Once on the other side, we can't, you know, go mooning around like Indians in blankets. Now, girls, ready? Strike, then, for your altars and your fires, which is Paris and the Exhibition." It was a warm, a thrilling speech.

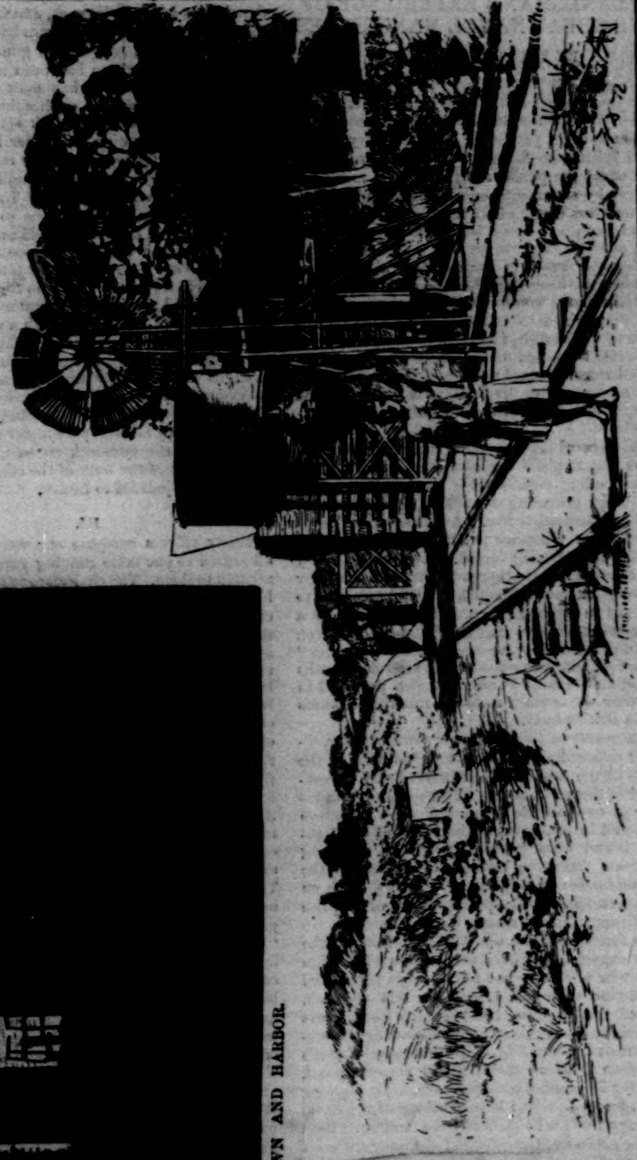
First, sweet Gertie put one of her pretty soft hands on her father's chin, steadied his old face with the other hand, tipped his glasses over his nose, and then kissed him, and Fanny moved with her battery straight in front of him. Had the mother connived with the daughters as a reenforcement? It looked as if she had. Then the action began. "Paris, papa. Oh, please! Everybody we know is going, and we will be so good when we come back."

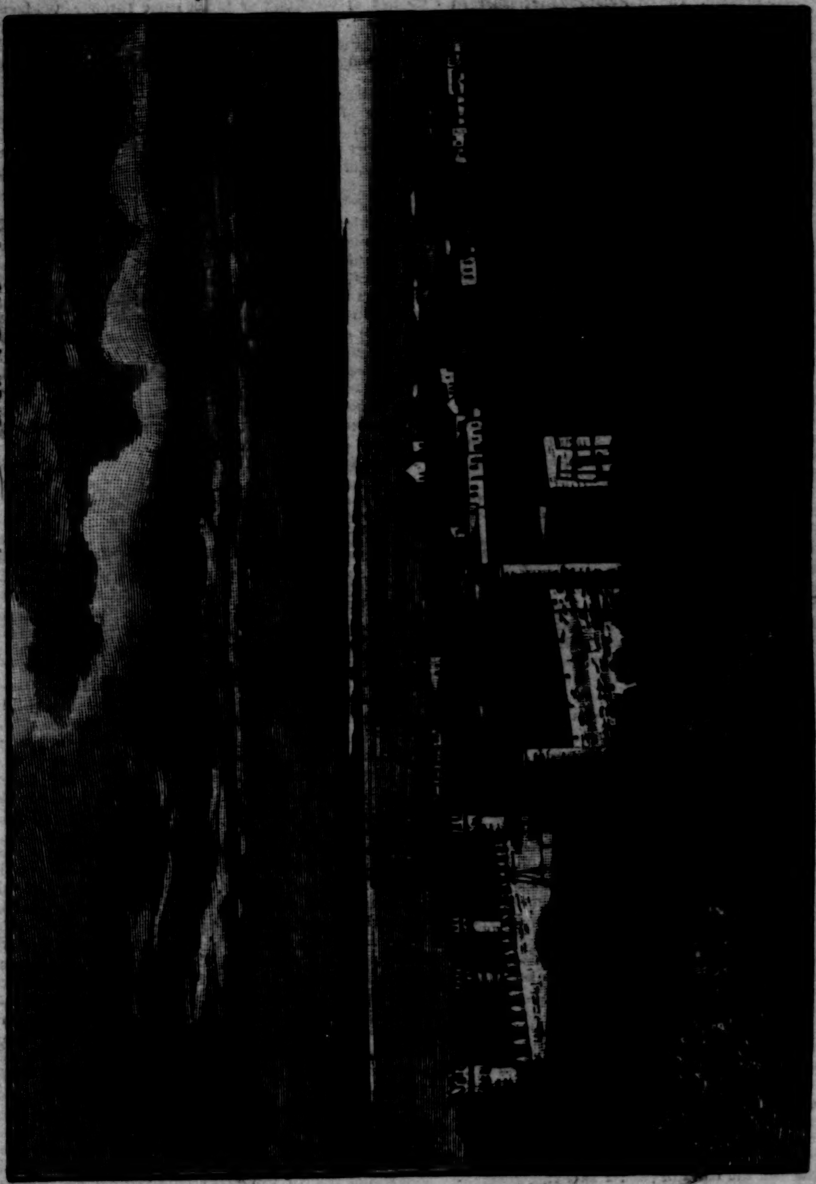
Wily old papa! he had actually been expecting it. Dear old man, as if he lived for anything else than to anticipate their wishes! But of course it would have been undignified for him to have given in at once. It was a delight to have them all pleading so, and to be kissed and fondled when he seemed to yield a point, and to be further kissed and fondled when he apparently hesitated. Then Fanny said something ever so funny; how she would teach papa French, and bid him repeat after her, like a good little boy, the opening line in *Télémaque*, which she had learned on purpose for the occasion. Papa laughed, called her "a sly puss," and then, with really less of a struggle than was anticipated, though "Do, papa, take us to Paris!" has been repeated in various keys, the battle was won. Battle suggests a loss on one side. There was no loss.

"What a charming family of Americans!" said an admiring and statistical Frenchman, as the whole party moved about, laughing and chattering, following one another in the Paris Exposition; "and there are many of them. Such a country, with such an increasing population, must in time acquire the supremacy of the world. But sept demoiselles! c'est beaucoup."

"YOU WILL TAKE US TO PARIS, PAPA?"—DRAWN BY W. T. SMEDLEY.—[SEE PAGE 575.]

VIADUCT OVER A WADY.


WATER-TANK AND WATER-CARRIERS.


DELAGOA BAY—TOWN AND HARBOR.

A WORKING PARTY OF NATIVES.

BUILDING THROUGH THE JUNGLE.

THE SOURCE OF THE DISPUTE BETWEEN ENGLAND AND PORTUGAL—DELAGOA BAY AND ITS RAILROAD.—From Photographs.—[See Page 575.]

A LANDSMAN'S EXPERIENCE OF THE GREAT NAVAL MANŒUVRES.

BY POULTNEY BIGELOW.

I.

In the summer of 1888 the British government sought to demonstrate to the world in general, and to Germany in particular, that her navy was in good fighting condition. For some time prior to this effort the public mind had been much disturbed by statements emanating from responsible quarters to the effect that England's boasted naval supremacy was largely upon paper, and that she was liable to be rudely awakened from a pleasant dream in the event of a great war. To allay this feeling, and at the same time vindicate the naval administration of the country, it was determined to call out an unusually large force of war vessels, and have them operate over an indefinite period of time, according to the accepted rules of naval warfare. The ships, guns, and men were to be well tested, and money enough was furnished to do the thing handsomely.

The general scheme of the manœuvres was to prove that England could keep a German fleet of corresponding vessels from leaving Bremen or Hamburg, providing that England had seven ships to Germany's five. About seventy vessels of war were therefore put into commission and divided into two squadrons, in the proportion of five to seven, one to represent England, the other to represent the navy which England proposed to shut up in its home port. It was treated as a foregone conclusion that the "Seven" Squadron would effectually prove superior to the "Five" Squadron, and thus once for all stop the mouths of the members of Parliament who persisted in alarming the country as to the relative weakness of the British navy.

The result of the sham war was, however, directly opposed to the fond anticipations of the Lords of the Admiralty. Admiral Baird, in command of Squadron Seven, failed completely in his attempt to blockade Admiral Tryon's Squadron Five, and in consequence the towns of the tight little island were technically pillaged all along the coast from the tip-top of Scotland to the lodging-houses of Brighton. Of course such an ending created a wide-spread feeling of surprise and disappointment among the people.

No foreign attaché was allowed on any of the ships engaged, and even the officers of foreign birth who were attached to the ships for special instruction were left behind on this occasion. One of the principal London daily newspapers offered me the opportunity of witnessing the manœuvres from the flag-ship of Admiral Tryon's Squadron Five as their special correspondent, an offer I accepted with pleasure, after warning them, however, that I knew nothing of the naval trade, and was a Yankee into the bargain. Both of these statements, instead of alarming the manager of this conservative paper, appeared, on the contrary, to promise impartial despatches, and from the complimentary language he used when I called upon him at the close of the "war," I judge that I had not wholly disappointed their expectations.

II.

Portland, England, unlike its namesake on the Maine coast, is a place that excites no interest in the tourist, and may be said to be alive only when some men-of-war rendezvous there. When I first saw it from the railway, it seemed as though we had reached a seaport town of importance, for the roadstead was crowded with the ships of the "Five" Squadron; nine iron-clads, eleven cruisers, and twelve torpedo-boats, a total of about 80,000 fighting tons, all scurrying to complete final arrangements, for the signal to sail was imminent. An officer of the *Hercules* took me under his protection as we left the train. At the landing-stage a heavy ship's launch was in waiting, and we immediately puffed away over the short waves of the harbor to the flag-ship, threading our course between iron monsters of all sizes and shapes.

Hardly a type of war craft that was not represented—the *Rodney*, of 9700 tons, with her armor 18 inches thick, at whose launching I had been present only three years before, was anchored close to the *Black Prince*, with armor only 4½ inches thick, and guns but half the weight of her neighbor's; and yet in 1861 the *Black Prince* was looked upon as a very powerful vessel. The torpedo-boats, lying close to the water, looked like mysterious and devilish pieces of mechanism, the torpedo cruisers almost as bad. The battle-ships *Hero* and *Rupert* looked as though built up from the bottom of the harbor. In fact, the only vessels that seemed seaworthy were the comfortable old-fashioned central-battery ships, whether unarmored cruisers or battle-ships mattered little. The rest look like, and are, in fact, complicated machine-shops, that do, it is true, move on the water, but do so somewhat under protest, much as a dog who is made to stand on his hind-legs—he does it, but does not enjoy it.

The flag-ship *Hercules*, to which I am accredited by the Admiralty, is a splendid specimen of the full-rigged fighting ship, central battery, plenty of deck room, easy in a seaway, thoroughly reliable, twenty years old, and much pooh-poohed by the present generation, who admire no war vessel that is not a bunch of puzzles in electricity, steam, and hydraulics. I may anticipate by saying that most of the very modern war ships—torpedo-boats, torpedo catchers, and torpedo cruisers—failed in these manœuvres to do what was expected of them, through a series of accidents, but the venerable *Hercules* and other plain unfashionable vessels behaved admirably.

The commander of the *Hercules*, an eccentric though withal good-hearted officer, received me with gruff good-nature, roared out one or two unintelligible words of command that rolled along the gun-decks like juvenile thunder peals, and handed me over to two blue-jackets, who loaded themselves with my luggage, and led the way to the stern battery. The after-gun had been hauled in from the stern port on the gun-deck; a species of canvas partition had been made to simulate a cabin; a hospital hammock swung in the middle of this space; a clothes-line represented my chest of drawers, the deck served as wash-stand, and in dressing for dinner I had to stub my toes many times in the brass run of the gun-carriage before acquiring the agility demanded by these improvised quarters. The ventilation, I must own, was abundant, one distinct advantage I possessed over all the officers in the ship that had to sleep in the poisonous spaces below the gun-deck. Poor fellows! I pitied them, for when I went down there early in the morning the air was as foul as in a transatlantic steerage, and those who slept in it awoke with a coppery taste in their mouths. The health of all the officers who slept below the gun-deck of the *Hercules* suffered, as it necessarily would, from living in a dungeon that is dark all day and devoid of air at night. The quarters of the admiral, however, occupy not only all the space under the poop, but a section of the gun-deck as well, an arrangement that forces the bulk of the officers to live in a manner prejudicial to health.

III.

Thirty officers compose our wardroom mess, all seated at one table running across the cabin allotted to them. The chairman, as the head, raps his gavel, thirty heads bow into their plates, the chaplain mumbles a form of grace, and the dinner is begun. Immediately before the dessert and "wine" the gavel of the chairman is again heard, and a second mumbling from the parson indicates that the mess is giving thanks for the food partaken of. The dinner at this point is over so far as food is concerned, but decanters of port, sherry, and massala are now sent from right to left, commencing with the chairman, until they have passed the whole extent of the mess and return to their places at the head of the table. All glasses being presumably brimful, the chairman solemnly fixes with his eyes the officer seated at the foot of the long table, raises his wine, and says, solemnly, "Mr. Vice—The Queen!" The gentleman thus addressed raises in like manner his glass, gives the table a sweeping glance, and in accents equally portentous says, "Gentlemen—The Queen!" Thirty thirsty mariners take up the words—"The Queen!"—toss off the liquor of their choice, refill, and proceed to general conversation—one, by-the-way, which not uncommonly turns upon the Queen's stinginess toward the "service" in general, and the officers of the navy in particular.

The admiral, the captain, the flag-lieutenant, and admiral's secretary—all these are deemed too valuable to place at the same table with the rest of the officers. They have a dining-room to themselves on the deck above, a well-lighted, well-ventilated space. They have a separate cook and steward, and of course much better fare. It struck me that the presence of the captain in the midst of his fellow-officers at dinner could do him little harm, and must do the others much good. It should conduce to sympathy between different grades, and lead to profitable conversation at table. Any one who remembers the venerable and much-beloved Professor Kendrick at the head of the West Point mess-table, will recognize the many ways in which a dignified and respected chairman can influence for good a table surrounded by younger and less experienced men. The captain of the *Hercules*, I was happy to hear, favored one mess for all officers, while the admiral did not. Opinion in the navy is divided on the subject, some thinking that admirals and captains should conceal themselves like the Mikados of old in order to heighten veneration for their orders; while more humane officers believe that admiration for worthy superiors grows with personal contact, and that inferior men only need shun the society of those whom they are called upon to command.

In the German service the captain is a constant stimulus to professional discussion on the part of his officers, and, needless to say, all take a pride in acquitting themselves well in the presence of such a judge. As compared to the German or American service, the English seems to evoke little discussion of a purely scientific nature around the mess-table—at least if the *Hercules* can form the basis of such a sweeping generalization.

Dress for dinner is, of course, compulsory amongst Englishmen, ashore or afloat; and our dinners were always very formal affairs, involving considerable display of white linen, and corresponding ingenuity on the part of the younger officers in carrying the necessary amount in their regulation chests. On a six weeks' cruise the opportunities afforded by the laundry are few; and I grieve to say that many a soiled shirt front appeared night after night at the resplendent mess-table, not merely upon the bosoms of young engineer lieutenants, but even upon the sacred breast of the Queen's chaplain himself. A flaw in the evening dress line is so criminal in the eyes of the English gentleman that I sought the explanation of what I saw, and was told that the relation of the executive officers, the fighters, to the civilian officers of the engineer and paymaster branch, is not of the most agreeable kind. It was pointed out that engineers are recruited from a class of people with whom the families of executive officers can have scant social relations on shore, and that therefore to force them into intimacy on board ship is not fair.

As to the food, it was not good; but that was the cook's fault, and partially atoned for by having at meals twelve servants in resplendent uniforms to pass the food, such as it was. A greasy soup came first, then an *entrée* of uncertain ancestry, followed by the last course, which consisted of a huge joint, accompanied by the irrepressible potatoes and greens. Cheese and biscuit took the place of dessert. On rare occasions a deep dish tart of apple or gooseberry was launched from the pantry, but it rarely went more than half-way around. Our table-cloth was usually unappetizingly dirty. The presence of the admiral or captain at dinner would have made the meal at least a fairly good one, and no admiral needs better food than suffices for his youngest lieutenant.

The mess was run by a messman, who is allowed fifty cents a day per head—twenty-five cents a head by the government, and twenty-five cents a head from each member. This amount is supposed to be sufficient to feed a British officer in a country where food is about as expensive as in New York. Messmen have the reputation of dying rich, but if they do it cannot be by the most honest means. Our messman supplied us with a persistent stream of bad eggs, poor butter, and awful coffee. He did not supply jam or cocoa gratis, but allowed members of the mess to buy of him at a liberal commission for himself. He received corkage on all wine drunk, and had the monopoly on the trade in beer and mineral waters. The bar-room receipts, it may be inferred, largely dominated those from all other sources combined, for the very badness of his food induced the thirst that made his bar business profitable.

The mess-room was below the gun-deck, and that below the admiral's quarters. What light we had at breakfast or lunch came through a skylight. Cabins of officers, with very small parts, opened into the room, and so bad was the ventilation that in the forenoon the air was unpleasant. Far from wondering that some of the officers occasionally felt indisposed, it is strange that any of them felt fit for duty. Bad air at night and bad food by day are two evils that unite most powerfully in driving men to the consolations of brandy and soda.

IV.

The only room on board where the officers below the rank of captain could congregate to sing a song, smoke a pipe, or play a quiet game of whist was one on the gun-deck no larger than that given to the admiral's secretary for his office alone. In this den it was not possible to get all who were entitled to its privileges, but as many as could crowded in night after night to join in a good strong chorus; to listen to the violin of the torpedo lieutenant, the 'cello of the assistant surgeon, or, best of all, the pathetic song of the portly paymaster to the piano accompaniment of the lieutenant of marines—a song whose chorus, as I remember it, ran:

> "I never thought she could be false,
> Or ever prove untrue,
> As we sailed away from Milford Bay
> Aboard the *Kangaroo*."

No naval officer, of course, ever complains of his food, his quarters, his ship, or his admiral, whatever he may find to grumble at in the government in general and the Admiralty in particular. Everything that I here find fault with is therefore on my own account, reflecting what the officers feel, but do not say. One of my friends, for instance, who has been eight years a commissioned officer, still sleeps on the gun-deck in a hammock, without even the privacy of a small cabin. His dressing and undressing are done in public on the deck, where men are cleaning their accoutrements and the stewards scraping fish. His whole wardrobe and toilet arrangement is comprised in a chest smaller than many a lady's trunk; on the top tray of this rests his wash-basin, and against its lid is hung his hand-glass. Two candles relieved the darkness of this region on the occasion of my visit, the result of which was so unsatisfactory that one could not tell, without feeling, where the hair was parted, where the cravat was tied, where the shaving had taken place, or whether the shirt front was clean or otherwise. All this to me seemed a relic of barbarous times, but many an English gentleman of to-day will tell you that this darkness and discomfort is one of the elements in completing the education of the perfect officer.

V.

Our blockaded squadron, which I call Squadron Five, to distinguish it from the blockading one, Squadron Seven, was divided into two divisions, one of which took shelter in a bay on the north-west end of Ireland, while ours set about defending itself in Bantry Bay, at the southwest end.

We anchored between a long narrow island and the main-land of Ireland, and promptly proceeded to defend each end of this miniature Long Island Sound by stretching at each end steel hawsers supported on booms and casks, sinking torpedoes and erecting shore batteries to protect the ends of the cables from marauding parties that might attempt to land on a thick night and emulate the fame of the immortal Lieutenant Cushing.

Our division consisted here of the armor-clads *Hercules*, 8680 tons; *Ajax*, 8510 tons; *Warspite*, 7390 tons; *Rupert*, 5440 tons; *Hero*, 6200 tons; the cruisers *Volage*, 3080 tons; *Cossack*, 1630 tons; *Iris*, 3730 tons; *Severn*, 3550 tons; *Sandfly*, 450 tons; and six torpedo-boats (built between 1885–7) of about 75 tons displacement, 125 feet long, 12½ feet wide, and 4 feet draught of water. These carried each 4 torpedo tubes, 2 three-pounder machine guns, 3 one-inch machine guns. Each was officially registered as capable of 22 knots, although in an ordinary easy seaway they could not probably do half that amount. The armament of these little boats was frequently altered during the manœuvres, but what I have given is what is officially expected of them. The *Sandfly* was classed as a cruiser, but proved unfit for such work. The *Cossack*, another of the *Archer* type of torpedo cruisers of the most modern construction, did not realize the promises of her projectors.

Of the big battle ships the *Ajax* carried as high as 18 inches of armor; *Hero*, 12; *Rupert*, 14; *Warspite*, 12; *Hercules*, 9. Our heaviest monitors launched in 1883—*Amphitrite*, *Miantonomoh*, *Monadnock*, *Puritan*, and *Terror*—have 11½ inches as their maximum. This by way of comparison.

Supposing now that a United States fleet was in Long Island Sound, aware of the presence outside of a blockading squadron superior to them in the ratio of seven to five, the situation would be somewhat that of Squadron Five at Bantry Bay. We should probably seek to obstruct the Sound not only at Hell Gate, but at Montauk Point as well, and await an opportunity when we could slip through the hostile blockade, and send our fast cruisers to prey upon the enemy's commerce. This was exactly what Admiral Tryon sought to do.

The torpedo-boats as well as steam-launches from the different ships went out night after night to patrol the neighboring waters, gather information about the movements of the enemy, and if possible cut off some of their vessels bound on similar errands. Occasionally some of our larger ships went out by day to feel the enemy's strength, and at least give them some trouble. They had to watch night as well as day, and the more we could annoy them by feints and false alarms, the more chance was there that our efforts would be successful when the time came to fight our way out in earnest. On an eminence facing the sea, upon an abandoned martello tower constructed during the Napoleonic wars, we had stationed a guard of blue-jackets, who signalled to us the news from the off-shore squadron by means of flags in the daytime, at night by flashing lanterns. The coast-guard stations along the coast kept us also apprised of the movements of the enemy in other quarters, where and when they coaled, the source of their supplies, and where they made their repairs. In this way we also learned how the other division of our squadron in the north, at Lough Swilly, was doing. The batteries erected on shore were manned also with blue-jackets, who kept a strict watch at night, went into camp in soldier fashion, and, to make assurance doubly sure, stretched most delicate electric wires in the neighborhood of their camps, in order that an automatic alarm would sound upon the approach of any blundering foot-step.

One night a dissipated frog, returning at a late hour to his domestic puddle not far from the extremity of one of the submarine mines, leaned for support upon one of these wires. He was not merely promptly galvanized, but roused the whole neighborhood in alarm. Out ran the guard from the tent, the sentry cocked his rifle and awaited the rush, the call to arms resounded on all the men-of-war, the ominous clicking of metallic implements ran like a patter of hail over the surface of the harbor, the electric search-lights played upon every cranny of the rocky shores, and—the conviction slowly stole over the fleet that some mistake had been made, and, so far as froggy was concerned, the mistake was certainly a fatal one.

VI.

In real war the number of killed and wounded, as well as the number of ships disabled, serve to indicate who comes out ahead in the different stages of the war. But for times of peace rules have to be observed, in order to insure fair-play. In Germany, during the great manœuvres on land between army corps, a staff of umpires is organized sufficiently large to cover all emergencies, and so well trained in their duties that the least possible friction is created between the contesting sides. Well-established principles of military probability are adopted, and the decisions are rendered, not only in strict conformity to the probabilities of actual warfare, but, what is of the greatest importance, *immediately*.

During the naval manœuvres of which I am speaking, a continuous source of irritation arose from the lack of umpiring. Four gentlemen were assigned for this duty, one upon the flag-ship of each division. As the flag-ship is commonly the heaviest of the fleet, and as most of the active work is done by small cruisers and torpedo-boats at a distance from the iron-clads, it so happened that our umpires saw scarcely any of the engagements about which disputes arose. As the Admiralty assigned them to their respective flag-ships, they did not feel called upon to go on any other, and in consequence, at the end of the manœuvres, they could, with a clear conscience, say that they had managed to be of as much use as though they had staid ashore. Our men came in with reports of having met this, that, and the other hostile craft, and having constructively smashed her to pieces by ram, torpedo, and guns. Our umpire would thereupon demand that said hostile craft be delivered over to us, or at least be withdrawn from further activity in the war. In each case our umpire rested upon the evidence of the participants, and in nearly every case his pretensions were pooh-poohed by the other side. In the heat of an engagement both sides are apt to exaggerate the situation in their own favor, and it is just at such times that the services of a cool umpire are most needed. We were, therefore, engaged in a war game without umpires to enforce such rules as alone could make the game of interest.

The rules, as laid down by the Lords of the Admiralty, contain such provisions as these:

"No gun is to be fired until ships are within 4000 yards by day or 2000 by night, and no ship is to approach within 1000 yards of an ememy's ship."

In the absence of trained umpires it can easily be seen how many errors of judgment might be the outcome of this rule alone.

"Should, however, one squadron prove to be incontestably superior numerically to the other, then if the stronger force can maintain a position

within three miles of the enemy for two hours, this is to be considered as evidence of the ability of the superior force to bring on an action, and to have gained the advantage in the engagement.

"If two iron-clads can succeed in getting within 3000 yards from a single iron-clad, and maintain such position for two hours, then the single iron-clad is to be considered to be put out of action.

"If an armor-clad or protected vessel can approach an enemy's vessel at anchor in an unfortified port within a distance of 2000 yards by day or night, the vessel so caught at anchor is considered to have been rammed and put out of action.

"A single torpedo-boat attacking will be put out of action when she has been under continuous fire for three minutes within a distance of 2000 yards."

I quote but a few examples by way of illustration. They are well enough as far as they go, but, like all rules, depend upon application for their value. Our umpires might have been spared the necessity of mastering their details, for the provisions of this code had as little effect upon the "war" as the resolutions of the Cobden Club upon the German Reichstag. But upon the umpires themselves the rules did fall with oppressive weight. They never turned into their bunks without anticipating a call on deck an hour or two before dawn. Any moment might be the occasion for him to judge between excited parties; day and night he had to be within call, and for every decision one party at least would be dissatisfied.

VII.

The afternoon of the 3d of August was a serious one to the fleet blockaded in Bantry. All the ships had filled their bunkers from the colliers that had come with us from Portland; the many small boats that abounded about the *Hercules* had been hauled on board and made snug for a cruise; the heavy metal crinoline that hangs from the sides of an iron-clad to protect it from torpedoes was raised, and the booms lashed to the ship's side. Black paint had been used on all the ships, so that in the darkness they could with difficulty be made out. Dinner passed off as usual, but afterward, instead of repairing to the smoking-room, officers hurried to dress for night work. The nine-o'clock gun, followed by the melancholy bugle calls, tokens usually of sweet sleep to follow, on this night meant hard work, and plenty of it; for no sooner had the bleak mountains about us absorbed their echoes than we were under way, steaming into the blackness in a ghostly black line of iron-clads and cruisers, the torpedo-boats going ahead to give warning in case a surprise was being prepared for us.

All the lights in the fleet were carefully concealed, even my white yachting cap and canvas shoes called for a suspicious growl from our conscientious commander. The signal-house was draped in sombre bunting to prevent a ray escaping, and even the binnacle was carefully covered with canvas. The guns were ready for action—every fighting man at his station. Wherever I moved in the darkness, it was to stumble upon groups of blue-jackets and marines crouched behind coils of ropes and spars, each man at his post, and catching what sleep he could before the attack should sound.

Below, on the table where we had dined but a few minutes ago, was displayed a full set of surgical implements, our two surgeons, with their staff of hospital assistants having arranged for the reception of any that might need help, from vaseline to sawing a leg off. Nor could I help feeling that the risk involved in manœuvring in the dark a large fleet of iron-clads and torpedo-boats justified all the preparations made.

As it happened, the great *Ajax* nearly ran us down, for she had misunderstood one of our signals, and kept on while we were backing astern. Fortunately the critical situation was discovered before it was too late, and we started ahead full speed, while the *Ajax* reversed, and thus escaped, though at one time we were close enough to have jumped from one to the other.

Slowly and silently we moved out toward where the enemy had been last seen from the signal tower, our three fast ships, *Warspite*, *Iris*, and *Severn*, taking the northerly, the rest of us the southerly, direction. Our object was to draw attention from these three escaping parties by drawing fire upon ourselves, and it was not long before our opportunity came in the shape of a silver streak on the black water, which we immediately recognized as the wake of a torpedo-boat. "Fire into the torpedo-boat," came the sharp, quick order from the bridge; and at once there blazed along the whole port side such a volley of small-arms and machine guns as must have sunk any torpedo-boat within a mile. In a moment afterward, however, the enemy whistled to indicate that she had discharged her torpedo, whereupon she indicated her whereabouts by a Holmes light. A light at the head of the torpedo gave us the welcome information that we had not been hit, the missile having gone astern of us. The torpedo-boat had evidently miscalculated our speed, for we were then doing twelve knots. The shot, however, was made under most favorable circumstances, in smooth water, close to the target, and a very large target at that. Surely if failure can result under such favorable conditions, torpedoes may be looked upon as bugaboos for real war. During all these manœuvres I am not aware that more than one torpedo managed to do any damage out of the dozens that attempted to do so.

When the hostile torpedo-boat had satisfied itself that its shot had missed, away it steamed into the darkness to give the alarm to the blockading squadron. Electric search-lights soon commenced playing upon us, we meanwhile crowding on all steam to southward, and firing our heavy guns as rapidly as possible. The confusion of the enemy we heightened still further by a multiplicity of rocket signals, and the sending of beams of electric light across their own, so that they were puzzled to read the signals of their own ships, and could but imperfectly profit by the light cast from their own electric searchers. Meanwhile the shots to the northward came fainter and fainter; we realized that the bulk of the enemy had concentrated upon us, had been completely outwitted, and had let our three fast vessels escape to the north. Now, therefore, we turn in under the shadow of the coast and put about for home, having given a two hours' start to *Warspite*, *Severn*, and *Iris*. By midnight the battle is over, and we are soon afterward in our bunks, sound asleep.

Two nights afterward the remainder of the ships escape as easily as did the first, and unite at Lough Swilly, in the north of Ireland, discovering, to their pleasant surprise, that the blockading squadron had given up the idea of keeping us locked up in port, and had gone off to protect English ports against the depredations of such as had already got loose.

VIII.

After a week of technical devastation to British commerce, Squadron Five repaired to Lough Swilly to renew its strength by putting coal into the bunkers of the twenty vessels of all shapes and sizes that then constituted its fighting strength. The Admiralty had requested information as to the best means of coaling at sea; they got none. Our highest result was forty-five tons in an hour, hoisting sacks with a derrick from the collier that came alongside, although the average was about thirty-six and a half tons an hour. Coaling by means of baskets carried on the heads of black women, as at St. Thomas, is much quicker than this. A small fortune awaits the man who invents a means of coaling at sea.

THE PERILS OF PETER DUFF.

I DID not hear him enter. Nervous as I was, I should have appreciated the foot-fall of a cat. He did not burst upon me. He rose up as if he had control of a theatrical trap worked through the carpeted floor.

There was my writing-table, littered with books. The limit of my horizon used to be a garden, seen through the window; now the figure of a great lank, ominously faced man blocked the light.

How did he get there? He did not glare at me, but veiled his eyes, concentrating their fell powers under half-closed lids. Clad in a seedy black coat, he stood motionless, like to a rusty-feathered crow, and said, in a croak that was startling enough, at least for me, "You are Peter Duff."

There was no inflection of an interrogatory character in those dread words. I have a well-trained ear, sensitive to an intonation. I should have detected hesitancy had he raised the pitch of his squawk the fraction of a note. He made no gesture; there was no facial movement. He simply had that concentration of vocal expression a man employs when he announces an irrevocable, undisputable fact.

I might have floundered in vain expostulations, empty explanations, that I was not Peter Duff, but I knew such efforts would be useless. I felt no inclination to wrangle over my identity. There crept over me the certainty of some former condition. What I was positive about was that I had been discovered. "Found out at last—at last!" was the despairing refrain that kept repeating itself in my mind. Yes, there arose some slight distress, but only that of a baffled curiosity. What was the particular specific culpability of Peter Duff? What had he done? For what was he to be brought to book?

I felt intense hatred toward the man who had trailed me—that rage which makes a cornered rat turn and try to bite his pursuer—but as I looked at the great, gaunt, big-boned man who towered over me, I knew at once how unequal would have been the combat.

I rapidly ran over the words the man had uttered, and I came to this fixed conclusion: I was the villain who, despite disguises, the avenger had at last unearthed. But why had he not put a heavy hand on my shrinking shoulder, and said, "Justice claims her own?" Or to his sepulchral, "You are Peter Duff," why not have added the *de rigueur* exclamatory, "Ha! ha?"

I looked at him in a furtive way. Was the bulge in his side-pocket caused by the stock of a pistol? His long black coat hung down so straight that I felt sure it was weighted at the skirts with a pair of handcuffs.

The man looked remorseless. Had he blinked, I might have hoped for a chance. Had he changed in the least the form of those words, "You are Peter Duff," I would have grappled with him. But he never weakened. He was as if of bronze, as is a statue, that, for ever and ever asserting a thing, never budges from its pedestal.

I was speechless. Silence meant consent. I ran back quickly, during a few painful seconds, over all the facts which might account for his presence.

If there had been a clang of the bell! Then, perhaps, the servant would have told him that Peter Duff did not live there. I never, as far as I remembered, had been confidential with either my wife or Bella as to my antecedents. Still, in an unguarded moment I might have been, for men will babble in their dreams. Had—had they an inkling of that doubly-dyed villain the one woman called husband, the other master?

I knew he was to come sooner or later. It was inevitable, preordained, and how futile, I thought, were all my deeply laid schemes! Of what avail twistings and doublings? Who was it, to use the common slang of the day—who was it who had given me away? Who among my former pals had peached? Had I or had I not been a fairly honorable scoundrel? When had I chuckled? That was years on years ago, when the last man Jack of them was hanged, on secret evidence I had sent the State prosecutor. Then, of course, I had reformed. How came I to be suspected, after all?

How silly it was of me in such a moment, when the cold sweat was oozing out of every pore of my body, to keep repeating an old Turkish proverb, "The sword of the Sultan grows and grows, and circles and sweeps and sweeps and circles, until it cuts off the head of the offender!"

All these thoughts trooped through my brain and jostled one another, but no question as to the denying of my identity presented itself. I was positive now that that fiendish man had my exact description. There would be witnesses who would come into the obscurest of police courts, and at once, unhesitatingly, point finger at me among a crowd of other men, and scream at me, "That is Peter Duff!"

Escape! I thought out a feeble plan. There was a Japanese paper-knife on the table, but of so soft an alloy that it would double in the cutting of a thick leaf. How would the killing of him have helped me now?

If the man would only say something more! Fortunately he did, or I would have gone mad.

"Mr. Duff, we will proceed to business."

The construction of that brief but guarded sentence brought some slight relief. The tension was momentarily loosened. He had mistered and mastered me. It was the mock courtesy adopted by the emissaries of justice; that cruelest of all small wit. Is it not recorded that Vidocq, when he struck down his quarry, the most murdering of men, said, "*Mon cher*, we will proceed to cut off your curly head with grace and despatch"?

Knowing every loop and tangle in the skein of my life, he would now proceed to unravel it. Evidently he would enjoy playing with me as a cat does with a mouse.

"I want your particular attention," said the man.

Had I been pretending to be an idiot? Had I, with devilish cunning, assumed the cretinism of imperturbable innocence?

"How clever I must be," I thought to myself, "to appear callous!" For the moment my vanity was tickled. What wonderful resources I must possess! What *sang-froid!* Here had I been stretched on a mental rack, and yet with such control over my twittering nerves that I actually came up smiling. "I must smile," I said to myself; "it belongs to the part." I did try to smile, and was particular as to the putting in of the least shading of mockery. I might outwit him yet, if I seemed perfectly at my ease, and yet no squirming wretch in the dark chamber of the Inquisition leaning forward to catch the whispered mumbling of the judge could have given more attention.

He was going to lay before me, in a gradual way, all the sickening details of my murders. It might have been not the last one, but some one before the last. How many had I committed? Who knew better than I that the perpetration of crime varies according to circumstances, the accidents of the surroundings? I consoled myself with the idea that there was no fixed scheme for murdering.

Had I, though, been actuated by greed or revenge? What a black record had been mine! Which trait had been predominant—the cruelty of the tiger or the maliciousness of the ape? Had I been dull, inattentive as to the effacing of my tracks?

Could they have—fished—out—of—the—East River the—black-handled—knife? Was it black or white? We had eleven kitchen knives—so my wife had told me. Would that knife, of the precise shape and form, make up the dozen? But then salt-water rusts steel so rapidly. Yes, there had been corrosive-sublimate in the house, used for domestic purposes. My wife might say that much to save me; but would she stick to it under the ordeal of a rigid cross-examination?

There was motion on the part of the man. He drew a black, greasy note-book out of his pocket, and applied the end of a stubby pencil to his lips. He was prepared to take down my deposition.

"Silence is my only escape," I said. "He never can extort a syllable from me." If I open my mouth, I was positive that I must criminate myself. Duff was a precious villain and deserved hanging, but Duff was no fool. "Dead men tell no tales," and live ones would not be dead ones had they the gift of reticence.

"I never give any more trouble than I can help, Mr. Duff," said the man.

He wanted to wheedle me. It was an insidious attempt on his part to be specious. I caught my tongue between my teeth and bit it. I bit it harder than I intended, until it hurt me. I felt mentally abased at my inability to suffer so little a pain without wincing. If I was a villain, I was a poltroon. I was losing even my self-respect, that heroism which any decent criminal should possess.

"Not wanting to give trouble, Higgins & Haggins must have their money, and we expect you to pay it. The items are: three-quarters of a dozen of shirts, and a half-dozen pairs of hose for Mrs. Duff, with other things. Bill sold in 1885, and you have been putting off the account for some years."

I knew it. In my wild career of crime I had the habit of rushing to fashionable "gents' furnishing goods" establishments, and in magnificent style purchasing at one time a shop windowful. With the recklessness of a Brummel, I would buy an assortment of ties, and never wear the same "four-in-hand" twice. What on earth had urged me to indulge in gorgeous dressing-gowns, smoking, polo caps, and eccentric tennis suits? What could I have ever done with a gross of shirt studs and cuff buttons? Had I been possessed of as many necks as Hydra, were there not in my bureau drawers hundreds on hundreds of dozens of collars sufficient to strangle that monster? And my wife! She had followed me headlong in my reckless course. Could I ever recall having seen a hole in her stocking? Evidently her extravagance had been fostered by me. I had carried her with me over the precipice.

I understood it now. The worst had come. I had been arrested on the eve of my sudden flight to Canada. But an hour more and I would have foiled them. Where had I secreted the carpet-bag so gorged with bank-notes that it was difficult to lock it? I had bruised my fingers in trying to force in the hasp. I had cooked the accounts and dabbled in Wall Street. Oh, the orphans and widows I had beggared! Of what avail to have steered a boom, to have breasted a panic? And still, had I but a single week before me, by means of our syndicate or a trust I should have sucked the whole street into my pool.

"Duff, you acknowledge the debt. You will pay it." He had the same tone of asseveration. "This day month there shall be a settlement. See the figure. You know it." He did not ask me to look at the total. It was taken for granted that I knew it. "You know it to a cent," he concluded. He built up his sentence in granite blocks.

I felt convinced that I did know the total, for when he snapped a rubber band about the book the elastic closed to like a steel-trap around my throbbing temples, and within my head there circled now an interminable line of figures.

I must have nodded, or he took my expression of mental collapse, my falling jaw, to intimate assent.

He toyed with the book again, slobbered with the pencil, rattled it between yellow teeth, protrusive, like those of a rodent, and then wrote down a date. I think he showed it to me, for, he said: "You see plainly enough. This day month is the 27th of July. It is agreed, Duff. Don't forget." He pointed with a dirty finger to a piece on the paper. Forget! forget! How could I forget? He disappeared. How did he get out of the room? What made something mirage-like come and flicker for a while where he had stood, then slowly fade away—return indistinctly, and then melt away?

How my head spun! Forget! Here was I under solemn promise to pay at the end of a month a row of figures standing for dollars of an interminable length. Where was the money to come from? I entertained some very peculiar hopes. Yes; what about that granduncle of mine, who was last heard of off the coast of Yucatan (*circa* 1803, whom I always believed was a pirate)? Would he reveal the exact spot under the cocoa-nut-tree where he had buried the doubloons? Would that loan my grandfather made Meyer Anselm Rothschild when they were both bagmen be returned, principal and compound interest, after an interval of more than a century? Would a quarter section I held a disputed title for, situate in Georgia, be found packed like a Belgian pavement with diamonds? Could I raise even a part of the sum?

Time—time! that was everything. I remembered another Oriental story, and found a momentary consolation in it. The Sultan said to a wise man, "Since you are so learned, and can do everything, pray teach my ape to recite a verse of Hafiz within the year. Fail, and off goes your head." "Certainly," replied the wise man, who walked away apparently unconcerned. Some friend asked him why he was troubled so little, and this wise man's reply was: "I must have patience, because the chances are really not so much against me. One year is a long time. In the twelvemonth the Sultan might die, or the ape or I." Did that wise man at once arrange to poison the ape or the Sultan? What else could have made him so cocksure?

I studied the grand total of my liabilities, learned what was its proportion to the people of the United States, to the world's population. I laid some very bold schemes. I constructed a martingale, based on the calculation of chances.

I might make myself a political power, settle down on something or other—one of the necessities of life—have it protected, then manufacture it, and prevent anybody else from making or disposing of it. That struck me as the most plausible of all my plans.

Thirty days! That was so short! Business, I said, after all, must have the element of romance, and time for its development. The Italian street-corner vender always will roast pea-nuts, because he is wanting in imagination.

Then my train of thought took another track. "How are great fortunes made?" I asked. Has not Balzac said, "Le secret des grandes fortunes, sans cause apparente, est un crime oublié, parce qu'il a été proprement fait?" If I only dared! All Peter Duff wanted was some little of his former nerve.

Rapidly fled the days. My wife noticed the change in me. I concealed the vulture that was, so to speak, leaving but a veneer of me, a thinner shell that has a Boulak mummy case.

On the morning of the 27th I sat gloomily at my desk. I had found nothing, and yet I looked ahead at the consequences of my default. It would convulse two, perhaps three, continents. If at the coming fair at Nijnii-Novgorod times were hard, I would be the cause of it. Russians, Tartars, Chinese, Armenians, would curse Peter Duff. Knowing that the crash must inevitably come, might I not give the tip to Chicago, New York, London, Paris, Berlin, Amsterdam, of the impending disaster, and induce financiers to go short on the whole products of the globe? But how would that avail me? Logically, it seemed absurd; and yet if men only could they would forestall an earthquake, discount a deluge, and take or give the odds on a cataclysm with the same easy grace as does a book-maker at the Suburban.

When that dread day of reckoning came I

was fitful, feverish, dazed. Every jingle of the bell would echo through my brain. So far Nemesis had not come, but I knew he was coming. I came to appreciate the exact moment when he looked at a date in his black book. He was striding through the streets. He had taken a horse-car. I could see him reading his paper coolly, calmly, unconcernedly. An accident to a street car? Why are they so rare?

The bell clanged. By the movement down-stairs I knew that Bella Maginnis was disputing with the ice-man as to the bulk of the piece of ice. Bella always was keenly alive to the interests of her employers.

"It's not only a schmal bit, but a dhurty bit besoides, yer a-lavin' me; as if my leddy's money wasn't as bright and clane as onybody ilse's in the strate."

Evidently the ice-man was parsimoniously inflexible, for I heard Bella declare him "a chate."

Then came the grocer's lad, the butcher's boy, who were received and dismissed with fleas in their ears. "And me a-doin' me livil bist to tidy up, a-clanin' this intry flure, and yer a-trampoisin' thru' it."

I suspected a big tub of water somewhere induced disputativeness on her part.

Then the tocsin sounded. My hour had come. There was no reprieve. I waited with bated breath. It was his clutch on the bell-pull. I heard the dreary croak. What were the exact words I did not know. It was only the depressing sound of it I caught. Then an irascible brogue.

"An' oi a-tellin' yer, sor, that Pater Duff—or Daff, is it?—no more lives here than Daffy Pater, by the token that oi've been a-livin' here, man an' bi, for six mortial yares, wid plenty to ate and dhrink, an' wages paid reg'lar. An' it's a-bodderin' me yer are, inthistin' that Duffy, which his Christian 'name, so sez you, is Pater, lives here, an' me a-talkin' English to yez as he don't, and nivir did, nor wull."

"But, my good girl, who does live here, then?" said the voice, in an attempt to soften the croak.

"Oi'm none of yer good gurls, sor, and kape a dacent tongue in yer ugly mouth." Then I heard that wooden oath a door makes when it slams to. Presently there was another ring. It was an accentuated ring, not prolonged.

"See here. It's no use. You are trying to shield this man Duff. He lives here. I saw him. He did not deny it. I am a-coming in."

"A-comin' in, are ye? Divil a bit. Not whilst there's a dhrop of blud to defind me masther and misthress, sor. It's wiolence yer up to, wid yer old carrion carcass. Now just you put out of this. No! Oi won't give ye the shatisfacshun of knowing, sor, who lives here, only his name isn't Pater Duff. What are ye after, onyways, a-hintrodusin' yourself into a gintleman's risidence?"

"He shall feel the power of the law."

I knew I was doomed now. The heroism of that poor girl could avail me no longer. Convicted forger, murderer, defaulter, swindler, I must make a clean breast of it.

Then I heard what sounded like a splash of water—just that swis-s-sh which indubitably follows the flying out (by centrifugal force) of the contents of a tub. I had the courage to look out of the window. I saw a soaking Nemesis. It ran across the street. Something resembling a broom was projected after it. A street car came, and a dripping man shook his fist at the house, and then disappeared.

Folk-lore, as Mr. Andrew Lang informs us, tells over and over again of the regeneration of the man brought about by the means of a little water. This crystal fluid the enchantress or anti-enchantress (as the case may be) invariably holds in the palm of her hand. Bella had broken the spell with a tubful.

My identity came back to me with a rush. I was no longer Peter Duff. It is possible that, having read too much political economy and psychology, there had been a spell of mental confusion, with obliteration of the Ego. And yet I felt sorry for Duff—the same kind of pity a sincere Scotchman expressed for "the Old Diel."

I am not yet quite positive as to whether or not, some time or other, a Peter Duff had not killed an assertive person—not necessarily a collector or house agent—and that the ghost of the murdered man still wanders around. I might have read of a mysterious disappearance, conjured up a flying Dutchman of a collector, who, having sworn a terrible oath to get a payment and failing, still stalks the world.

Said my wife to me that evening: "Dear, I am so glad you are quite yourself again, and have made up your mind to take a holiday. You were getting distressingly morbid. As you say you will do no work for a week, Bella proposes a thorough overhauling of your study; and what a good and faithful creature she is, and anticipates all our wishes!"

"A paragon," I replied, expansively.

"If she has a fault, it is a certain acerbity shown to strangers, especially on scrubbing days. Sometimes I am afraid she is a trifle too vivacious."

"Is she?" I asked, innocently.

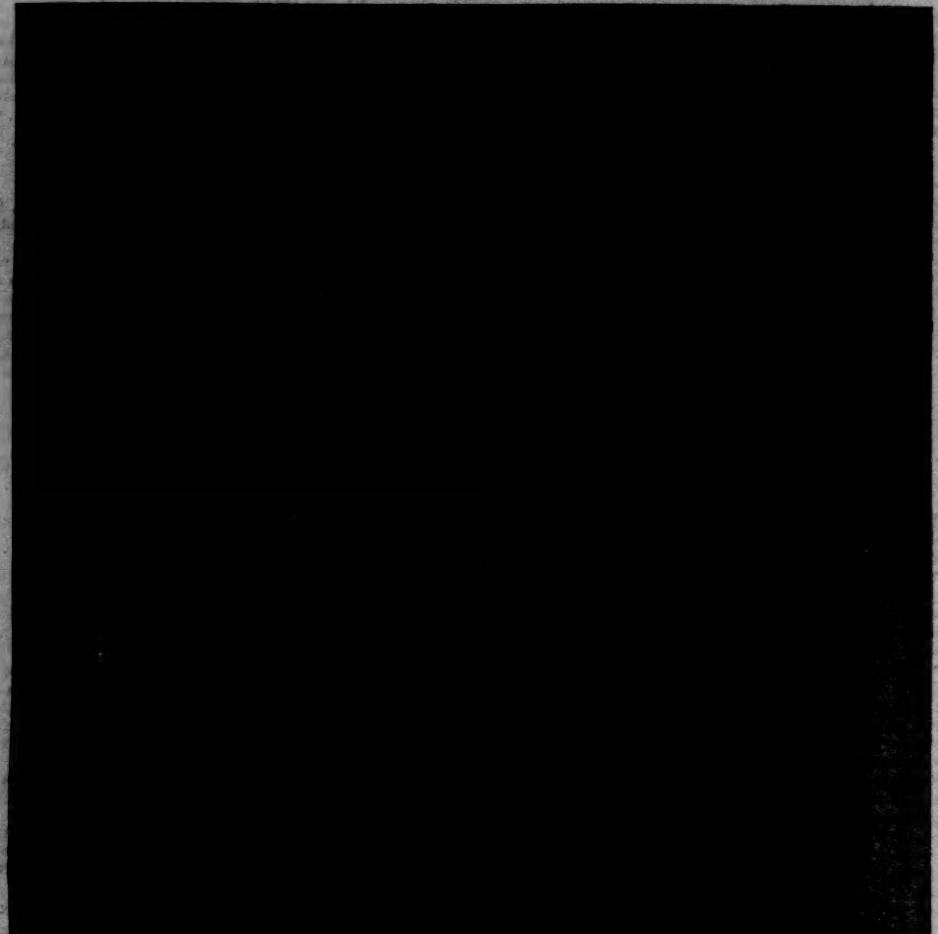
"It is too absurd," continued my wife. "There was a horrid-looking man here to-day, who showed such persistence about something or other that Bella lost her temper, and she threw something at the man. I must tell her to be more careful."

"My love, pray say not a word to Bella, at least on this occasion. She was acting Perseus to my Andromeda."

"But Perseus was a man."

"So he was. I reverse the rôles, that's all."

"Well, dear, I never did pretend to follow you in your mythological allusions." BARNET PHILLIPS.



MURAL STATUE IN HIGH RELIEF OF EX-PRESIDENT McCOSH, OF PRINCETON, BY AUGUSTUS ST. GAUDENS.—FROM A PHOTOGRAPH BY ROSE, PRINCETON.

ST. GAUDENS'S MURAL STATUE OF DR. McCOSH.

"I HAVE finished my work as President of this college; I have written the last volume of my philosophy. My labors seem to be ended; but I don't like to be idle; I like to work. I am in my seventy-ninth year, but I'll still lecture to the students, and I hope occasionally to write something in defence of my philosophy. There is nothing gives me greater pleasure than to follow the work of my boys—the students who have sat under my teaching. And there are seventy-six of them now occupying important chairs as professors in colleges of this and other countries."

This is a part of what the venerable ex-President McCosh said as he sat in a group of his old students on the Princeton College campus during the recent Commencement. He still showed some traces of the dangerous illness through which he had passed, but his eye was bright, his voice rich and full, and his faculties as alert as ever in seizing the point of the questions which were addressed to him. As he sat there on a glorious June day under the ancient elms and in the shadow of old Nassau Hall, he was a splendid specimen of a fine type of man—with the large physique, clear complexion, and vigorous manner of one who might have spent his years in the open air, but with the bent shoulders, massive forehead, and deep-set eyes of a hard student—a fit subject for a sculptor.

The group of young men around the ex-President were members of the largest class which had ever been graduated at Princeton—the class of 1879; and after ten years they had returned for a brief season to their Alma Mater to do honor to the aged scholar who for twenty years had been its President, and who had within twelve months resigned the cares of that office. In his honor this class were about to present to the college a mural statue in bronze of Dr. McCosh by Augustus St. Gaudens—the sculptor who has won a foremost place by his "Farragut" in New York, "Puritan" in Springfield, and "Lincoln" in Chicago. This ceremony was performed on June 18th, when, in the presence of a very large audience in the Marquand Chapel, the statue was unveiled. The class president, Rev. A. W. Halsey, formally presented the statue; President Patton received it for the college, and Dr. McCosh made a few remarks full of fine feeling.

Thus was brought to successful completion a project upon which the class had entered on December 10, 1887, when they decided to raise the sum of $12,500 for such a memorial. The sculptor began to make preliminary studies for his work in May, 1888. Dr. McCosh gave him many sittings in his studio, and Mr. St. Gaudens visited Princeton several times to see the doctor in his class-room and catch his most characteristic attitudes. A life-size study of the head, and many small sketches of the figure for pose and composition, were made in clay. Finally, in August, 1888, work on the large clay model was begun, and in March, 1889, it was completed and sent to Philadelphia to be cast in bronze.

Mr. St. Gaudens undertook the work with enthusiasm, perceiving what an unusual subject for a sculptor was offered by Dr. McCosh's imposing figure and noble head. As he worked, the subject grew upon him; and instead of a bronze portrait, part in low and part in moderately high relief, he has made—what is as effective as a heroic statue—a very high relief, parts of the figure being entirely free from the bronze ground-work. The head is in almost full relief, and is an impressive portrait of Dr. McCosh as he appeared ten years ago in his physical prime. The pose of the figure will be recognized by all who have heard Dr. McCosh, in pulpit or class-room, as one most characteristic of him when he was summing up a long course of vigorous reasoning. The Genevan gown (always a little off the right shoulder), and the open coat, with heavy watch-guard and eye-glasses in view, are details most familiar to Dr. McCosh's old students, though they may have little importance in estimating the artistic worth of the statue.

The statue conveys an impression of strength and dignity, with scholarly grace. It is simple, unartificial, imposing; it suggests not so much the student and philosopher as the instructor and leader of young men, and the ruler over important interests. The countenance expresses the commanding and forceful side of the ex-President's nature rather than the benign and reflective. It is, all in all, as posterity should know the man who found Princeton a poor struggling college with 200 students, and made it a rich university with more than 600. The statue is placed to the left of the apse in the Marquand Chapel, and is set on a bracket and in a border of African marble, after the design of Mr. Stanford White. The entire bronze is 8 feet 2 inches high and 4 feet 7 inches wide. The bronze figure of Dr. McCosh is 6 feet 4½ inches high.

The class of 1879, which presented this memorial, graduated 120 men, among them Cleveland H. Dodge, C. C. Cuyler, Harold Godwin, John Farr, Edward W. Sheldon, William B. Isham, Jun., and William R. Wilder, of New York; Colonel Edwin A. Stevens, of Castle Point; Cyrus H. McCormick and Rev. Thomas C. Hall, of Chicago; Professor Woodrow Wilson, of Wesleyan University, the author of *Congressional Government*; Louis C. Vanuxem and Edward H. Trotter, of Philadelphia, and other men who have already reached positions of influence and importance in the business and professional worlds. ROBERT BRIDGES.

THE NOISES OF NEW YORK.

BY JULIAN RALPH.

How diametrically different persons disagree about the noises of New York! "I am not aware that there are any noises in particular," remarks the New-Yorker. "They are the all-pervading sensation of the city," says the country visitor. There are men, called frequently to the city on business, who have gone from one hotel to another, almost exhausting the enormous list of hostelries in an endeavor to find one in which they can enjoy sufficient quiet to sleep at night; and then, again, only the other day I met a New-Yorker who had been out on a Dakota ranch, who said that he no longer wondered at the statement that the loneliness of life on the prairie drives many men insane; the awful quietness there had almost done as much for him. A week ago a famous naval officer came to town from Norfolk. Meeting a friend on Broadway, he said to him, "Come off this street; I wish to speak to you." He led his friend to Church Street, a narrow, tall-sided cañon of great houses that gathered and focussed the noise of the traffic as the tube of a trumpet does the sounds that are blown into it. He led him farther, to West Broadway, where the elevated railroad roofs the street over, and the heavy trains pound and roar like giant sticks beating a vast drum in which men have built a street. Then he saw that there could be no quiet found out-of-doors by walking, except upon the end of a North River wharf, so the two went into a restaurant, where the naval man confided to his wandering city friend that not only was

BLIND BROOM PEDDLER.

he unable to hear—"even his own thoughts," as he expressed it—but that on every visit to New York he was in mortal terror of his life for two or three days, until he became once again accustomed to the rattle and crash of trains overhead, the confusion of vehicles at the crossings, and the omnipresent deafening undertone that fills the air.

If strangers have one of their senses obliterated by the city's din, how is it that the citizens can hear? The question is natural. The simplest answer is that they grow accustomed to it. The best answer is an illustration. If the oldest New-Yorker were to go at this minute into the operating-room in the top of the Western Union Telegraph Company's building on Broadway, his sense of hearing would be so confused by the sounds of the five hundred or seven hundred telegraph instruments that he would be filled with wonder at seeing that each operator was able to hear and write down the often minute sounds of the one instrument in his charge. Each operator would explain that the general noise was as so much silence to him. In such a room or in such a city

"CAB?" "KEB?" "COUPÉ?"

we can appreciate the wondrous qualities of the human ear. We are able to comprehend the fact that two boiler-makers pounding rivets on the inside of a cylinder of resonant steel may relieve the monotony of their work by exchanging family gossip.

It is said that the lights of New York city affect the atmosphere for very many miles, so that under certain meteorological conditions (I fancy it is when the sky is clouded and the clouds are very high in air) there is a perceptible illumination of the air as far away as Keyport, New Jersey—at least twenty miles. A citizen of that village has declared that he can "almost see to read" a newspaper there on some nights when there is no moon and no lamps or lights are near. In receiving the assertion the reader should reflect upon the elasticity and scope of the word "almost," and should be frankly informed that the villager is at times a sailor and at times a poet. Yet it is not to be doubted that at night the great city would appear to an eagle, or from a balloon, like a huge torch or gigantic lantern, and its light may sensibly affect the neighborhood for a distance of twenty miles.

But far more interesting and tangible is a study of the noises of New York pursued at a distance. Over on the heights behind Hoboken, for instance, or perhaps the back part of Brooklyn is a better point, it is most astonishing to hear the great city wake up. Before that time is reached, it has been curious to hear it sleep—for at best the mastodon settlement has a troubled rest, only to be likened to that of a fever-stricken invalid. As the noise of a rushing train, or of a caravan of heavy-laden trucks, or the hoarse whistle of a great steamer, sounds across the miles of house-tops, one can easily fancy that the mammoth aggregation of men and women is tossing in its bed, is catching its breath, or relieving itself with the loosening of a long-pent-up sigh.

But hark! hear the great town wake up! Daylight is just touching the sky with gray. There is a faint rattle over the pavements, then another and another rattle, each in a different part of the long narrow island. The milk carts are the harbingers of the morn in Gotham—the New York chanticleers. It is the milkmen who are the early birds. The first rattle of their heavy wagons, of their jangling cans, and of the hoofs of the horses ahead of them, doubtless sounded from the neighborhood of the Long Island ferries. The next came from the down-town Jersey ferries, the last from the uptown ferries to New Jersey. These are in the main the wagons of the wholesalers sent to meet the trains from the farming regions north, east, and west of the city. The disconnected sounds of these milk vans increase in number and grow and swell, until at last they blend in a general common volume of sharp, slightly metallic sound. Fancy how many wagons there must be, how many clashing cans, how many horses' hoofs! If we only estimated a quart of milk to each New-Yorker for the approaching day, the noise would be that of the cartage of 1,600,000 quarts, and a quarter of a million more for the tea and coffee and custards and ice-cream of the two hundred and fifty thousand persons who will come to town to leave some of their money with us during the day. Hear the sharp, clear vibrations of the myriad milk vans, all racing over the Belgian blocks—for they move at nothing short of a gallop. Surely the city must be now awake, for this clatter presently ascends from every part of it.

Awake? No, indeed. No more than an army camp may be judged to be so because one hears the circling cry of the sentinels, "Four o'clock, and all's well." That is all that the milk carts are saying to the listening man on the roof in Brooklyn. He knows that not even the hard-worked drudges of the kitchens are yet astir. If we were over among the otherwise quiet streets, we would see the lights all blinking, the houses all closed and dark, and only here and there a few pedestrians, a few lounging policemen, a few bakers taking the air by poking their white caps up out of their hot cellars. But before the rush and race of the milkmen is done there laps over the sound of their wagons a duller, heavier, louder noise—a distinctly bass tone. It grows apace. It covers the first chorus as men in the carpet stores roll one pattern over another. Ah! this is the tumult of the market-men—not the butchers, but the wholesale green-grocers, the produce commission merchants, they call themselves. These have cumbrous heavy double trucks that are sent out very early to meet the first boats and trains from the peach groves of Delaware, the cranberry and grape regions of South Jersey, the small fruit farms of southern New York and northern New Jersey, and the market gardens of the belt beyond the suburbs. The truckmen seem all to come out of the Ninth Ward, a tangled corner of contrary streets on the west side, where the stables are behind the houses, and the trucks are kept in front of the doorways. If you can say of any class of men in cosmopolitan New York that they are Americans, it must be said of these truckmen. And so, very largely, are their employers, whose stores are all crowded together between Washington Market and Spring Street Market in West, Washington, and Greenwich streets, and the dozen or more side streets that cross these great arteries.

It is a dull hoarse roar that the truckmen and the milkmen and the now rapidly increasing trains on the four lengths of the elevated railroad are making. But the city is not awake yet, though from this time forward the growth in volume and the change in tone of the city's uproar are so gradual that, instead of seeming to swell, it is rather as if it drew nearer. The key-note of the music of the metropolis has been struck, and the whole band of concerted sounds is now going rapidly to blend its different parts. Rising and advancing, the mighty volume of noise rushes through the air from this time on, until at last, by six or seven o'clock, there can be no more. Later enforcements are not able to impress their strength upon the ear. The aural comprehension is surfeited.

How the buildings of the great city are trembling when the noise is at its height! We may not feel them tremble, as we do the framework of a boat in which a powerful dynamo is used for the purpose of electric lighting, but we know that they

"RADISH-E-E-S!"

"OLD RAGS!"

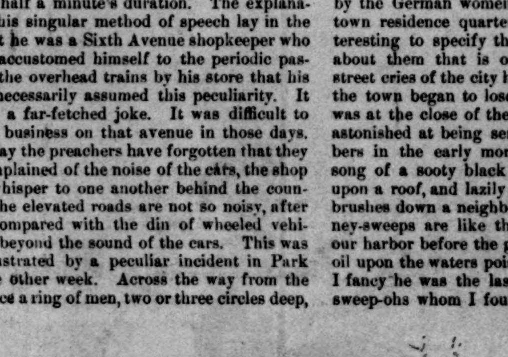
FISH VENDERS.

are trembling, because when only one heavy truck passes a dwelling in a comparatively quiet side street we can feel the mason-work jarred in its every part, because when the elevated trains were first run, the people in the houses half a block away from each of the iron roads thought their dwellings would topple in upon them, because astronomers have told us that it is useless to attempt to utilize a telescope on the roof of a New York or Brooklyn house, so continual and forcible are the vibrations of the buildings, caused by the heavy traffic upon the earth. President Stephen V. White, of the American Astronomical Society, who lives on Brooklyn Heights to enjoy a degree of quiet unobtainable in New York, has been obliged to sink the foundations of his modest observatory forty feet into the soil in order to put them beneath the disturbance of the ground. Fancy, then, how all our houses in New York are dancing about, so to speak! When the elevated roads had been in operation only a short time, a house along the route—it was in South Fifth Avenue—fell in ruins. But it was scarcely the fault of the aerial railroad. It was because the house was decrepit, and was tired of its long-sustained effort to hold itself together.

At this time—when the elevated railroads were new—many New-Yorkers believed them unendurable. It is wonderful what we will get used to—to what strange usage we may come at last. There was a church in South Fifth Avenue, there was one in West Third Street, three in Sixth Avenue, and one in West Fifty-third Street—all beside the iron road-beds. The clergymen in them could not make their sermons heard. The Rev. Dr. William M. Taylor, the famous minister of the Broadway Tabernacle, was one of these. At that time it was a joke of the paragraphers of the day that a summer visitor to Long Branch was observed to converse very peculiarly. He talked very rapidly, and then stopped a moment; then talked again, and again stopped. It was discovered that the periods during which he talked were two minutes long, and were divided by pauses each of half a minute's duration. The explanation of his singular method of speech lay in the fact that he was a Sixth Avenue shopkeeper who had so accustomed himself to the periodic passage of the overhead trains by his store that his speech necessarily assumed this peculiarity. It was not a far-fetched joke. It was difficult to transact business on that avenue in those days. But to-day the preachers have forgotten that they ever complained of the noise of the cars, the shop clerks whisper to one another behind the counters. The elevated roads are not so noisy, after all, as compared with the din of wheeled vehicles far beyond the sound of the cars. This was well illustrated by a peculiar incident in Park Row the other week. Across the way from the Post-office a ring of men, two or three circles deep, had gathered. Persons on the Post-office sidewalk, less than twenty-five feet away, imagined that a rough-and-tumble fight must be the attraction. When they made their way to the outer edge of the gathering they found that the crowd was listening to a performer on the cornet. That of all instruments was not able to produce a sound that could pierce the tumultuous racket of that part of New York to a distance of thirty feet! However, that is an exceptionally busy and noisy block or two, from Ann Street to the Franklin statue. To illustrate again the volume and strength of the city's noise in the down-town streets, let it be known that a violent thunderstorm makes but a slight impression there. We read in the newspapers of a frightful electrical disturbance that has done great damage in the city, yet the reporters who have written what we read, the desk men who have edited it, and the printers who have set the accounts up in type, are almost certain to have performed those tasks in upper stories near the City Hall beside open windows, mindful only of a deadened rumbling in the air during the storm. The lightning itself seems diluted and robbed of its terrorizing quality to a down-town New-Yorker.

I may be mistaken, but I do not think that wild birds are seen to fly over the lower end of Manhattan Island. We have plenty of sparrows down-town, but they are everywhere and every way invincible, and besides they are born in the city like ourselves. We have very many other birds wild in the Central Park, but that is different. To get there they need only to fly from the wooded heights of New Jersey, the farms of Westchester, or the fields of Long Island, passing over comparatively quiet residence streets, few in number, between the rivers on either side of town and the great inviting park. But who ever saw them flying over the business end of the city? I fancy the racket and clatter would frighten the stoutest or the dullest birds.

What are the noises of New York taken categorically, from the cry of "Cab, cab, coupé!" at the ferries, to the plaintive call of "Rad-ish-ees!" by the German women who invade the far up-town residence quarters? It might not be interesting to specify them all, yet there is much about them that is odd. To begin with, the street cries of the city have greatly changed since the town began to lose its provincialism, which was at the close of the war. Then we were not astonished at being serenaded in our bed-chambers in the early morning by the loud hoarse song of a sooty black chimney-sweep, perched upon a roof, and lazily lowering his weights and brushes down a neighbor's chimney. The chimney-sweeps are like the lobsters that enriched our harbor before the greater opulence of refuse oil upon the waters poisoned them—all, all gone. I fancy he was the last of the tuneful race of sweep-ohs whom I found in a cellar in Sullivan Street a few years ago, seated like a Hindoo god, and shaking his head in despair over the loss of custom. I thought to get much ancient and valuable information from the old man, but to nearly all my queries the wrinkled, white-haired darky replied, "I s'peck I must forgot 'bout dat, sah," or, "I don't c'reckly remember 'bout dat, sah."



"CHARCO-O-A-L!"

His wife sat by, placidly knitting and listening and looking on. Feeling that the interview was not wholly satisfactory, she endeavored to explain it in this perfectly reasonable manner:

"Do you know, sah," said she, "that I s'peck de ole man ain't jist right in his mind? I do; indeed and 'deed I do. Well, you must git along wid him der best yer kin, mister. 'Tain't no wonder if he am a leetle cloudy in his brain, considerin' de number ob times he's been hit on his head by falling bricks. He's been hit in dat way, sir, tell his head is right sof'."

The clam venders, once characteristic of the city, are all dead or out of the business. Their cry used to be a rhyme set to music. It began, "Clams, nice clams, all fresh to-day; clams, hard clams, from Rockaway." The silent soap-fat men, who trained dogs to drag their heavy little carts, have also disappeared, and we will have to tell our children what queer wagons the charcoal peddlers went around in, for it is only now and then that one is seen. These are jet-black vehicles, with oval tops made by bending thin poles almost into a circle from one side of the wagon to the other, and then nailing boards across them. The cry of the drivers, "Char-r-r-coal, charco-o-o-al," is only heard occasionally in our days. It will soon have passed away, like the cry of the dodo and the snort of the bison, never more to be heard.

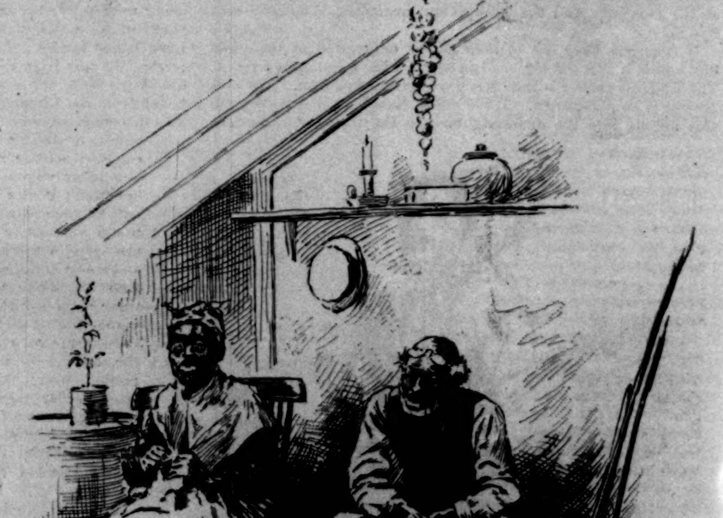
The street cries uptown are still numerous and peculiar, and now that the fact is mentioned, many New-Yorkers will, upon reflection, note how singular it is that almost all of them are uttered in plaintive, almost tearful tones. The shrill cry of the women peddling "Straw-ber-e-e-es"; the pitifully high-keyed monosyllable of the old blind man who taps the sidewalk with his long cane and calls out, "Brooms, brooms"; the almost pathetic call of those who trudge, tinker's furnace in hand, shouting "Tin-ware to mend, to mend; tin-ware to mend!" the yell of the men whose voices are half drowned by the jangle of a string of cow-bells on a rope above their push-carts: "Anny rags, rags, bottles, ould iron, anny rags"—all these, and nearly all the other venders, peddlers, and itinerant workmen, fall into a plaintive, melancholy tone when they cry their business. If they fill our streets with music, it is only to be likened to a requiem over lost hope or fading ambition. Who can tell why this is so? It cannot be that their tones express their feelings, for some are fat and some are merry; others are stalwart and lusty. The blind broom man, for instance, is as rotund and chubby as an overgrown figure of Cupid, yet his piteous cry almost brings tears to the eyes of sensitive persons. One set of constant patrolmen of our streets is silent, yet makes a noise more pervasive than any of the others. This is the contingent of scissors menders, who, as they roll their grindstone frames along upon the wheel which also serves as the adjunct of the treadle under their feet when they are at work, keep pulling a sort of dinner-bell with one finger, the bell being swung upon the same useful frame. The fish venders cry their wares by sounding blasts upon rude tin horns—the horns of Thanksgiving Day in the city, of the charivari or tin-pan-onion serenades in the country. Some peddlers of market garden stuff use bells like those of the scissors grinders, but ring them differently. The ring of the scissors man is a continuous series of short strokes. The ring of the green-grocer is the violent music of a call to dinner. The fact is mentioned because it explains why it is possible for New York housewives to know exactly what is passing, as they all do, without going to their windows to look out.

Even though a good-wife be at her sewing in the back of the house, she reads the noises of the street as the rest of us do the strokes of a bell. She knows the ragman's jangle, the fish-dealer's blast, the bell of the scissors man apart from that of the vegetable peddler, the mere tone of the broom man, or the berry vender, or the orange seller trudging beside his golden load. These sounds tell her more than the mere nature of each man's calling. They tell her of what she will find cheaper than usual in the stores, for when too many fish come in at once the fish men multiply extraordinarily; when the supply of oranges or bananas or apples is greater than the usual demand, the venders of these edibles come in great numbers. Thus are perishable goods marketed in the city. The wholesalers pass the word that they have something to sell dirt-cheap, and instantly there flock to them the owners of peddlers' licenses in what the gifted author of *Bluebeard* would call "clouds"; and how in other clouds the poor people of the tenements flock to the peddlers in turn, even when what they sell is tainted, or worse! Ah! that is pitiful to think of—far worse to see.

These same wagon peddlers seek other wares. For instance, when the dealers in auction goods offer some product of the factories for which the public call has ceased, or for which there has been little demand at prices that include a fair profit, these licensed peddlers speculate in those wares. They change their line of trade with every other day in the year. Now you find them all peddling cheap tin-ware; now they have loads of plush picture-frames; now they are selling lithographs, or gaudy chromos, or penknives, or dolls; and so the list might be stretched beyond interest, almost beyond human credence, for there is very little which men make or sell that they do not load up with and peddle; now they have something for business men or boys, and they line Nassau Street; now they have what they think poor women want, and they invade the poorer districts; again they are up-town selling fish; anon they are at the Jews' market in Hester Street with wagon-loads of shirts at sixteen cents each, or of shawls at a quarter apiece.

Nothing has been said about the organ-grinders, though they certainly increase the aggravation of the noise, if they do not swell its volume. New York enjoys the rare distinction of possessing a hand-organ mender. The organs are made abroad, but this artisan repairs them, and fits them out with new tunes as fast as Dave Braham invents the ballads of the streets to be fitted into the comedies of our local playwright, Edward Harrigan. When an organ is past mending, when it has lost its teeth, and its lungs give partly out, and its joints squeak, it is not to be thrown away. It then becomes a "wheezer," and easily finds a new owner in the person of some blind or decrepit beggar, who sleeps by day and comes out by night to sit on a curb-stone in some gay and busy night centre like Madison Square, and to grind on incoherently upon the broken barrel and the sympathy of passers-by. The music of a wheezer may be best described by saying that if it were to proclaim the air of "Yankee Doodle," it would sound as if it were sung this way, "Yan— doo— come to town, — — — a po—, stick a feather — — crown, — call — macaroni." One must have been a New-Yorker a long time to resist the rheumatic appeal of a wheezer.

In these days, when several of the penny afternoon newspapers are enjoying circulations above one hundred thousand copies a day, the newsboy is more of a noise-maker than he used to be; and it is only fair to him to say that he was always a powerful factor in the city's confusion.



"TAIN'T NO WONDER IF HE AM A LEETLE CLOUDY IN HIS BRAIN."

There is now only a short period, say from ten o'clock in the morning until before one o'clock in the afternoon, during which the newsboy's voice is stilled. One of the wonderful new sights of the town is that of the gaudy little delivery carts of the afternoon newspapers dashing madly along Printing-house Square, each with a motley, ragged band of street urchins scampering pell-mell after it, one boy at a time succeeding in handing up his store of pennies, in return for which a man in the cart tosses out the requisite number of freshly printed sheets. And as the wagons dash through town they enable the boys to invade its every quarter, its every alley, with their shrill alto cries of "Extra! Extra!" For we never have any other quality of news in these days than that which the word "extra" expresses. And so, as the boys scatter and their cries echo far into the night, I must close this article upon the city's noises, conscious only that, long as it is, the subject has been but opened. The ballad peddlers will feel slighted; the boys whose whistling turns the Post-office Building into a great organ all day long; the office peddlers who sell soap and shoe-strings, suspenders, matches, and sandwiches in the big down-town buildings will owe the WEEKLY a grudge; the Frenchmen who sing in the streets for pennies will feel neglected; the thundering trains that shoot through the great tunnel will be all but forgotten. But there must be an end to this article, even though there be none to the noises.

THE SPECIAL CORRESPONDENT.

BY DAVID KER.

"THE next time there is a fight out here," said an officer to me in Afghanistan, just after the Kandahar campaign, "we had better tell off so many men to *keep the telegraph wires cut* till all is over."

This sarcasm, though aimed at the blundering orders sent out from England, may have been also meant to include the special correspondents, who are no favorites with military men as a rule. Nor is this at all surprising. The newspaper letter—which is often pointedly caustic in criticism or unsparing in denunciation—has many more readers than the official bulletin, and not unfrequently arrives before it. Archibald Forbes's announcement of the Zulu defeat at Ulundi, McGahan's announcement of the fall of Khiva, my own announcement of the Russian capture of Kungrad on the Oxus, all reached the home public before the official despatches containing the same news; and in such a case the first comer is master of the situation, and his words, whether they deal blame or praise to the men in command, make an impression not easy to efface.

The subjection of correspondents to a rigorous censorship in some recent campaigns, and their absolute exclusion in others, show sufficiently the feeling with which they are regarded by the men in uniform—a feeling pithily summarized by a grim old brigadier of our own day: "By Jove, I'd hang all these scribbling fellows—hang 'em, every one, sir!" But though so obnoxious to the professional soldier, the "special" is himself a soldier in his own way, and equally bound to face all perils and all sufferings in the cause of duty, as one for whom no excuse can avail. He may be faint with thirst and hunger, dizzy from fatigue and want of sleep, almost blind from "sand-blight," half delirious with fever and overwork; he may be forced to sit taking notes in his saddle amid a pelting storm of balls and bullets, with half a dozen of the enemy's riflemen singling him out as an excellent mark; but no matter—his despatch must be written, and, when written, it must be sent off at once. It is easy enough for some comfortable "stay-at-home" to sit over his newspaper at a well-spread breakfast table, and pooh-pooh all that the poor correspondent does or says.

The blunders and misstatements of travelling journalists have furnished the small "wits" of society with many a threadbare joke; and they have certainly some cause to smile when a man pronounces authoritatively upon the state of a country which he has just entered for the first time, or begins a letter with "Every intelligent native with whom I have conversed," after exchanging a dozen words with two half-caste storekeepers and a native groom. I shall not easily forget how one of my brother correspondents in the East eloquently prophesied a time when every market of western Europe should be filled with "the preserved fruit stored in the *khans* of Tartary, and the rich fleeces sheared from the great *lama* of Thibet," or how another, indistinctly overhearing some mention of the British wounded being carried away by a *doolie* (ambulance litter), began his next letter with a thrilling account of "the ferocious doolie swooping down upon the battle-field and carrying off the helpless wounded."

But there have been many "specials" at whom no one dare laugh. Stanley fighting his way through the deadliest jungles of East Africa to save Livingstone; Russell calmly pencilling his notes before the death-dealing guns of Sebastopol, or keeping his saddle till he fell fainting to the earth under the burning sun of Lucknow; Nasmyth and Butler nerving the garrison of Silistria to a defence that broke the power of Russia and changed the course of history; McGahan proclaiming the wrongs of Bulgaria in words which fired the whole world into indignant sympathy; Vereshtchagin rallying the wavering Russians against tenfold odds in the fatal breach of Samarcand; Forbes galloping alone across a whole province, through countless perils, with the first news of Plevna in his pouch; the English correspondents in the Soudan, of whom only one out of five came back—such figures as these will live when the fools who sneer at them are forgotten.

But the correspondent's life has its bright side as well as its dark one. To see two great armies meet in the shock of battle, and history make or unmake itself before your very eyes; to stand face to face with death, not for hours, but for days and weeks, in a besieged fortress or a wrecked ship; to stem flooded rivers and struggle up snowy gorges; to watch the sun rise over the great white cathedral towers of the highest mountains upon earth; to hack your way through the gloomy depths of tropical forests, swarming with fierce beasts and fiercer men; to ride hundreds of miles over a voiceless desert, with no guide save the stars by night and the bleaching bones of the dead by day—one week of life like this is worth ages of the tame, vegetable existence that we call civilization.

RECENT IMPROVEMENTS IN PHOTOGRAPHY.

PROBABLY no branch of science has advanced more rapidly in important scientific improvements during the past ten years than that of photography. Primarily this has been brought about by the general introduction of the modern sensitive gelatine film, either spread on glass plates or paper, now sold commercially on an extended scale. The prepared glass plates or sheets of paper are used in the camera to receive the image. The extreme sensitiveness of the film enables instantaneous photographs to be very easily made. So general and popular has the taking of instantaneous views become, that manufacturers of apparatus are kept busy in devising improved instruments for more perfectly carrying out the requirements of the photographer.

Heretofore the photographer has been confined to the employment of glass plates for the support of the sensitive film, and glass is still the support preferred, on account of its rigidity and transparency; but it has serious faults—weight, is very fragile and of varying thickness, often containing air bubbles, which sometimes mar a good negative. Lightness in all kinds of photographic apparatus, that it may be readily carried about and handled, is one of the noticeable features of the present time. In order to further lighten the burdens of the amateur photographer, manufacturers have within the past five years been striving to perfect a substitute for glass that shall be as light and as flexible as paper. It is somewhat singular that soon after the daguerreotype was invented, paper sensitized on a silver bath was used, when dry, in the camera. Then collodion flowed on glass was substituted, which is still used, and is known as the wet process. As the thickness of the dry gelatine film is only two-one-thousandth of an inch, naturally some lighter support than glass could be used. So paper again came into use as a support, being evenly coated with the sensitive emulsion, uniform in thickness, very light, and capable of being manufactured in long rolls, on which successive pictures, one after the other, could be made; it was particularly adapted to the wants of the tourist.

In order to overcome the drawback of the increased opaqueness of a paper negative over glass, and render it semi-transparent, the paper side of the negative was smeared with castor-oil, which had to be forced into the pores by means of a hot flat-iron. This was unpleasant to do; besides, the resulting positive print frequently showed the grain of the paper. Shortly after this, in England appeared a thin transparent film, which was made by dipping very thin paper in a resinous compound, and then coating the sensitive film on both sides of it. It was only made in short pieces about the size of sensitive plates, and was not a practical success, inasmuch as the film would crinkle up and not lie flat. Still later was invented, and is now on the market in England, the Vergara film, made after Froedman's patented process. Its base is a thin bichromated insoluble sheet of gelatine, having the yellow color eliminated by treatment with sulphurous acid. Owing to its thickness and slight brittleness the film cannot be readily prepared in rolls, but is used mostly in cut sheets. It comes nearer fulfilling the chief desire of the photographer than any film previously invented.

But in 1888 a film based on a previously patented industry which has grown up in this country—the manufacture of celluloid—appeared. It was about as transparent as glass, having one side smooth and the other slightly roughened to resemble ground-glass, was insoluble in the ordinary acids and water, did not curl or crinkle, and stood the ordinary processes of development, fixing, and washing as perfectly as glass. It is a little curious that at this late day the same collodion used so many years ago as a support for the sensitive film on glass should now by a simple process be converted itself into a substitute for glass; it illustrates very forcibly how slowly sometimes the simplest inventions are perfected. The manufacturers of transparent celluloid had not until the present moment succeeded in making sheets of it in long lengths, or of a sufficient degree of thinness to permit them to be rolled up like paper; hence it has only been used in cut sheets the size of the usual glass plates. Even this advantage was greatly appreciated, since the great weight of glass was avoided.

An American house which has been foremost in bringing before the public flexible films, and until lately has prepared sensitive negative paper on a large scale, from which the negative, after exposure and development, is removed and transferred to a gelatine skin to render it transparent—a very troublesome and unsatisfactory process—has now succeeded in perfecting a very thin transparent celluloid film as clear as glass, as flexible as paper, of uniform thickness and quality, will compactly roll up like paper, and is manufactured in sheets fifty feet long. It is to be known as the Eastman Transparent Film. A roll of the prepared film is inserted in a light box attached to the rear of the camera, called a roll-holder, and as each picture is exposed it passes over a flat surface to a second spool, on which it is wound up. The undeveloped exposures are then cut off from the long roll, and developed in the usual pyro and potash developer. The result is a negative as transparent as glass on a thin smooth film about $\frac{4}{1000}$ of an inch thick, unbreakable, tough, and as light as paper. Another advantage is that negatives thus made do not require as much washing and dry much quicker than when the sensitive film is on glass. When dry, the film negative is ready for the printing-frame, or can be enlarged from precisely the same as if it were glass.

The many uses and advantages of such an important improvement in photography will be apparent to any one at all familiar with the subject: we will not stop to point them out. One, however, worthy of special mention is that large direct photographs may be made with comfort, since the weight of glass is abolished. In quite a different direction has another novel improvement been made which has been demonstrated to be feasible. It consists in spreading on the back of the sensitive plate, in a dry form, the salts that go to make up a developer, so that each plate carries its own developer. All one has to do after exposure in the camera is to place the plate in a tray containing a little water. The salts on the back gradually dissolve, thus forming a developer strong enough to bring out the image in a few minutes, saving the operator the trouble of mixing a developer. Another improvement not quite so practicable consists of automatic photographic machines, arranged to take a picture of the person standing in front of it when a nickel is dropped into a slot. In a few minutes the picture of the person is developed, fixed, and dried, and comes out of the machine accompanied by a small picture-frame or case. Photography is rapidly becoming very popular, and is universally practised. On account of its simplicity, it is easier to learn than it is to read. Doubtless the improvements will continue, its field of usefulness expand, until no one can foretell what wonders future generations may see.

F. C. BEACH.

THE FLOOD AT JOHNSTOWN, NEW YORK.

THE cloud-burst and flood at Johnstown, New York, on the afternoon of Tuesday, July 9th, by which five persons were drowned and a great deal of damage done to dams, mill property, and public bridges, formed part of one of the most remarkable coincidences known in this country in many years. Following so closely upon the great disaster at Johnstown, Pennsylvania, and resembling it in origin and course of action, the occurrence in the little valley of the Cayadutta was well calculated to excite terror in the minds of superstitious people who saw it, and to induce the more practical-minded to question the possible fatality of the name of the two unfortunate towns. The beginning of the disaster was unspeakably weird and awe-inspiring. At five o'clock in the afternoon the yellow July sunlight lay thick and hot upon the peaceful Cayadutta Valley. The little Cayadutta creek trickled feebly down through artificial mill-ponds on its way to the Mohawk River at Fonda. A drowsy hush hung upon the tremulous wheat fields and upon the yellow country roads. Nature seemed to be asleep with the fading of the day.

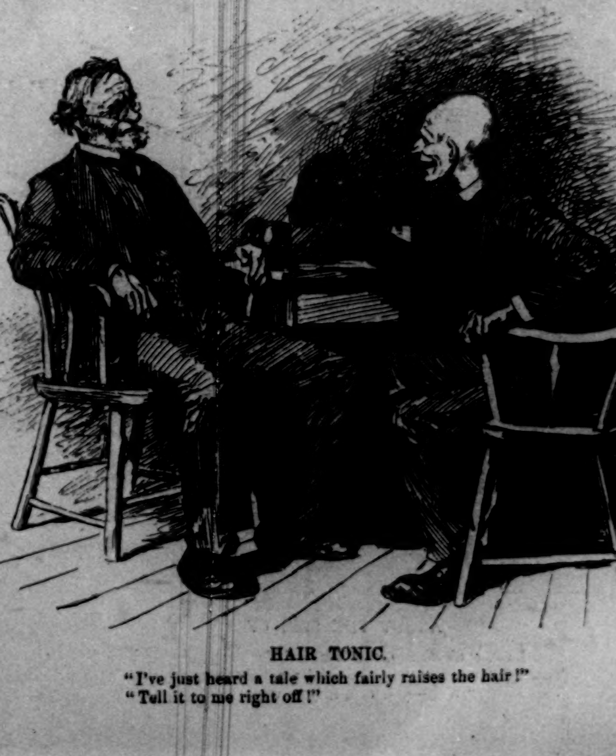
All this was changed like a flash. The sun withdrew behind a sudden darkness of the sky, while in the northeast a huge cloud, seamed all over with electric fire, appeared above the fields like a monster of the air. Then up from the southeast rose a second cloud, grim, silent, and awe-inspiring, to meet the first. To the terrified people of the neighborhood they were frightful giants, mad with heat and rage, about to do battle to the death. This thought was justified by the course of the two clouds, for they came together with a roar and shock terrific beyond all human conception. The trembling grain, the waving bushes, and the tossing trees were beaten to the earth in an instant, as though an unseen power had cut a great swath through them. On a tree-covered knoll in the centre of the disturbance a man had stood watching the approach of the two clouds. Before he could flee to a place of safety they came upon him. When they had swept past, the knoll was bare of trees, and the man was prone upon the ground, dazed and paralyzed beyond the power of speech.

When the clouds came together a mighty deluge of rain dashed upon the earth. In a few minutes' time plough furrows became rivulets, dry watercourses became creeks, and the gentle Cayadutta became a raging torrent. The people remained in-doors and watched the storm, the like of which had never before been seen in that neighborhood. Such thunder, such fierce and awful bellowings of the sky, no native of the Mohawk Valley had ever heard. The clouds came together about three miles east of the town of Johnstown. Close by was McVain's dam, in the course of the Cayadutta. It held back the rush of water for a short time, and then gave way with a crash, letting a great flood down upon the dams below. Schriver's pond, at the foot of the hill upon which Johnstown is situated, held the water and wreckage in check until the pressure became too great to be resisted. Then, with a roar that sounded high above the raging of the flood, the dam broke. The full force of the pent-up body of water struck Schriver's three-story mill fairly in the side. A large part of the structure went like a straw. Its beams and timbers tossed about for a few moments, and then found a lodgement among the graves and head-stones of the cemetery a short distance beyond the Cayadutta's banks.

By this time the sun had gone down. The banks of the Cayadutta were crowded with people who had rushed from their homes to see the flood as soon as the deluge of rain had lessened. More than a thousand persons were gathered on and near the stone bridge at Perry Street, a short distance below the site of Schriver's mill. The police had warned them away from the bridge in vain. Between half past seven and eight o'clock in the evening a dozen or more persons were leaning over the iron railing of the bridge, looking up-stream, and watching the water as it shot through the arch a few feet below where they stood. Suddenly there came an awful grating sound, and amid shrieks of terror and wild cries for help a part of the bridge upon which the people were standing fell into the flood. Five persons went down in the wreck. They were swept under the bridge and out into the raging waters below before so much as a step could be taken toward saving them. As the electric-light works had been flooded, there was no artificial light in the streets. The darkness was so intense that absolutely nothing could be done to help the unfortunate people.

In its rush down to the Mohawk the Cayadutta swept away other bridges and did much damage to property. The total damage is estimated to be $150,000 or more. Rickett's, Liebenheimer's, and Stewart's dams, between Johnstown and Fonda, were torn out. The same storm and flood did much damage in the valley of the Mohawk. At Fonda, the highway bridge and the New York Central and Hudson River Railway bridge were swept away. A railway bridge between Fonda and Tribe's Hill was also carried off, together with the four railway tracks. The plank road between Fonda and Johnstown was piled up in heaps all along its length. In the country round-about many highway bridges were destroyed. In the fields in the storm's track the growing crops were ruined.

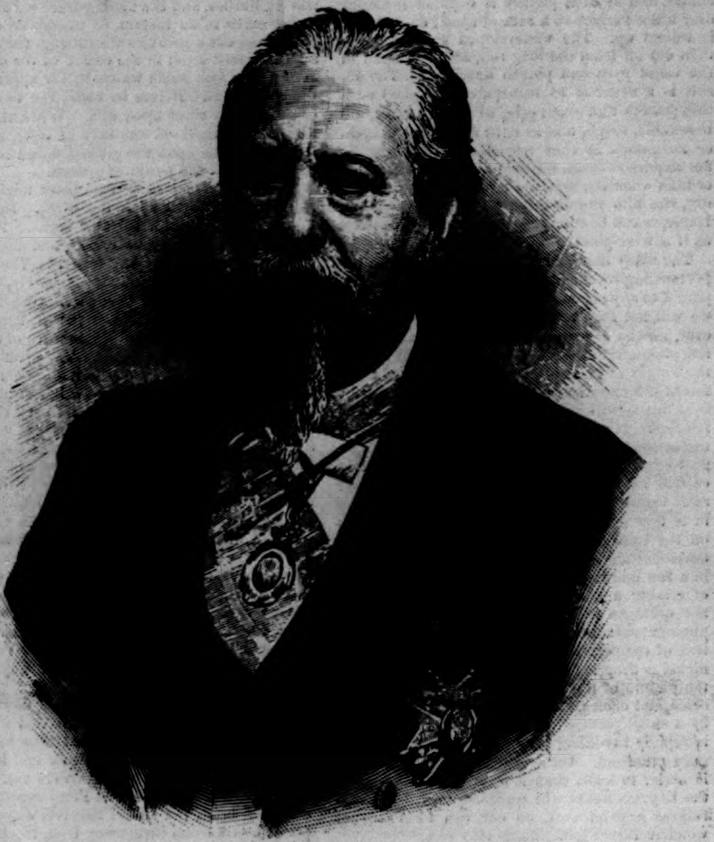
No one seems to be to blame for the disaster at this Johnstown. The broken dams were weak, but they were not expected to stand such a strain as the flood from the cloud-burst put upon them. The people on the stone bridge had been warned repeatedly to keep away from it, as it was not considered strong enough to withstand the rush of the water.



HAIR TONIC.

"I've just heard a tale which fairly raises the hair!"

"Tell it to me right off!"



JOSÉ ZORILLA, THE NATIONAL POET OF SPAIN.

THE NATIONAL POET OF SPAIN.

It is years since any event in Spain not connected with politics has awakened so general and warm an interest as the crowning of José Zorilla as national poet—a ceremony which was performed in the city of Granada, June 22d. The act was accompanied with all that pomp and festivity which the Spaniards delight to throw around their public spectacles: endless banquets and processions, orations and poems, musical and literary tournaments, and of course bull-fighting without stint leading up to and following the central event. The personal representative of the Queen Regent, the Brazilian ambassador bearing an autograph letter of congratulation from Dom Pedro, many representatives from Spanish America and the Spanish colonies, delegates from the leading literary societies of Spain, scholars, journalists, and politicians, school-children and working-men's societies, all united with the greatest enthusiasm in the tribute to the aged poet. The object of all this adoring honor, Zorilla himself, was born in 1817 in the city of Valladolid. Destined by his parents for the law, he spent two years in legal studies, and then, disgusted with the profession chosen for him, and filled with an impetuous longing to embark in the career of literature to which he felt himself inwardly drawn, he went to Madrid, at the cost of a rupture with his family, to test his fortune in the metropolis. His first volume of poems appeared when he was but twenty, and for eight years afterward he poured out poetical and dramatic productions with true Spanish fecundity. No less than ten volumes of verse and thirty dramas are to be assigned to this period. But his literary activity brought him more fame than money. His father having died unreconciled to the disobedient son, the latter was left to his own resources. He went to Paris, and there began publishing his longest and most famous poem, "Granada"—a sort of epic, into which he wove some of the proudest traditions and most cherished legends of the southern kingdom. It was to this poem that was due the initiative taken by the *Liceo* of Granada in proposing his crowning, it being thought eminently fitting that the province and city whose glories he had sung should take the lead in doing him honor. But even from this work Zorilla derived no profit—what with a bankrupt agent, pirated editions, and the difficulty of making collections from American booksellers. The poet became discouraged, and left his epic unfinished, though it had already extended through two volumes. Next came twelve years passed in Mexico, lost to poetry, though filled with pleasant experiences, and marked by the temporary advantage of the patronage of the mushroom Emperor, Maximilian. Upon the fall of the latter, Zorilla returned to Spain to begin life anew. It was a hard struggle. Hack-work was for a long time his principal contribution to literature. Finally, Amadeus appointed him a sort of roving commissioner to examine Italian libraries and archives, but his salary on this score ran for less than two years. Then he had a period of successful lecturing, and at last, through the eloquent advocacy of Castelar, was granted a pension by the government. Since then he has been living a retired life in Valladolid, to be called forth at the end of his days to receive, in memory of his former literary labors, the nation's tribute of affection and honor.

ABOUT THE SIZE OF IT.

The Law. "*Gentlemen*, the law forbids your fighting here."
The Gentlemen. "Who's a-goin' ter fight 'ere, anyway?"
The Law. "Well—you *can*, if you want to."

MIDSUMMER TRADE AND FINANCE.

After the celebration of the national holiday the business of the country was resumed with energy and confidence. The past week has brought out statistics for June which well illustrate the activity of railroad traffic this season. The receipts of live stock at Chicago during June were larger by one-fourth than in the same month last year, the receipts of grain were 80 per cent. greater, and those of provisions nearly equal to June, 1888, and June, 1887, together. No wonder that the railroads concerned have exerted themselves to prevent a wasteful cutting of rates from neutralizing such a business; no wonder that the great majority of roads in the Inter-State Association have stood firm in opposition to the interests which assailed them; and no wonder that the St. Paul and Chicago roads are finding means to meet the Northern Lake competition on through business from the East without entirely sacrificing their local rates.

Statistics of condition of grain on the 1st of July are also received. Most important are those which refer to wheat, showing a probable harvest, notwithstanding injury to spring wheat in June, of from seventy to a hundred million bushels more than last year. General trade is reported fairly good; the great iron trade, as a whole, better than previous favorable reports. Adjustments of railroad tariffs have been made to facilitate the movement of iron in both directions—East and West—and the grain schedule of the trunk lines, after a brief disturbance from individual action by the Baltimore and Ohio line, has been lowered for Indian-corn, but reaffirmed for wheat. The freight problems are so numerous and intricate, especially west of Chicago and St. Louis, that disturbance must be expected from time to time, but the prospects of a reasonable working solution are felt to be much better than a week ago.

The better aspect of business—better both for merchants and for railroads—has been reflected in the stock market, where prices that were sharply depressed have made a quick recovery. The ease of money at this centre has conduced to this result, demand loans having ruled at 3 to 4 per cent., although the bank statement showed a further loss of $2,500,000 of surplus reserve, and higher rates in Boston have drawn off an amount of currency which is considerable in view of our low reserves. It is the fresh money out of the Treasury which accounts for this ease, the payment of its July interest and the placing of the quarterly pension money to the credit of disbursing officers. But this money is being gathered back into the Treasury again at the rate of $400,000 to $700,000 a day, as the purchases of bonds are small. Unless, therefore, the Treasury buys bonds more freely, its daily drain upon the banks, joined to the commercial demands for currency, will soon result in dearer money. The relations of the Treasury to the money market have been pretty generally discussed in print since they were considered in this place a month ago, and it is to be hoped that the head of the department is preparing to do something beyond ordering the publication of statistics. Figures have been issued to show that the community outside of the Treasury has seven millions more of coin and paper money than it had last year at this time. But this is a small matter; what the public wants is all of its money that is hoarded in the Treasury, to do with it as it pleases, without any dependence upon such imitation of divine providence as can be offered by a Secretary of the Treasury. This hoard is called in official language the "available balance" in the Treasury, and it amounts to-day to $55,000,000, even after July interest has been paid and quarterly pensions set aside. And this without reckoning the lawful money hoarded in the Treasury for redemption of bank-notes.

The railroad meetings at Chicago are the occasion of much and various comment on the admitted difficulties of the situation. Small but troublesome lines have before now been absorbed by larger companies, and the tendency has for some time been supposed to be in the direction of larger railroad corporations, though it might be more correct to say that many corporations have grown from small to large, from a company at home in a single State to one with allegiance to half a dozen States. But the recent speculation in trust certificates has led to the suggestion of a great railroad trust, to absorb and represent all the roads of a great division of territory. The railroad companies, however, may prefer to wait and see what is the precise legal status of the trusts which are already in operation.

The trust certificates dealt in at the Stock Exchange continue active—the Sugar, Cotton Oil, and Lead trusts, that is, for the other two are neglected. The lead certificates have declined under continued heavy selling, after which the public is informed that the total of these now amounts to $8[illegible],000,000, a great increase since former confidences of this kind were made by the managers. The public may well prefer the rule which the Stock Exchange is able to apply to companies whose stock is on its regular list; thirty days' notice of the precise amount of increase. But the trust certificates are not on the regular list, only in the "unlisted department"—a distinction which has made no difference whatever to the activity of the market for them.

It may be worth mention that singularly few new issues of bonds are at present offering in the market. This fact, with the very high prices current for old and first-rate bonds, should improve the price of good bonds that are not yet fully distributed among investors, and to some extent this is seen at the Stock Exchange, though not so largely as probably ought to be the case.

H. J. Macdonald.

New York, *Thursday evening, July* 11, 1889.

THE CLOSING OF AN IMPORTANT OUTLET.

The blockade of a port is not more injurious to its commerce than is even the temporary obstruction of the bowels to the health of the system. Constipation necessarily arrests the secretion of bile, impedes and disorders digestion, and poisons the circulation. The safest and most effective, as it is also the most genial, laxative, and anti-bilious medicine in existence is Hostetter's Stomach Bitters, and it is more than probable that its sovereign efficacy as a preventive and remedy for intermittent and remittent fever is largely due to its reformatory action upon the liver, an organ prejudicially involved in all malarial complaints. Persons with a tendency also to rheumatic, neuralgic, and kidney trouble cannot do better than to antagonize it with Hostetter's Stomach Bitters, which invariably checks it at the outset. The weak, moreover, are invested with strength by this fine invigorant.—[*Adv.*]

STOP-OFF
AT CRESSON SPRINGS ON PENNSYLVANIA RAILROAD TICKET.

The Passenger Department of the Pennsylvania Railroad Company announces that passengers holding first-class limited tickets of any description, except those designated as "Special," will be allowed to stop over at Cresson Springs, during the season, as long as desired up to October 31st.

In order to avail themselves of this privilege, passengers should notify the train conductor of their intention to break the journey at Cresson, and immediately upon arrival should deposit their tickets with the company's agent at Cresson.

This concession will be greatly appreciated by through passengers, as it will enable them to become acquainted with one of the most delightful mountain resorts in the country. All through passenger trains, including the celebrated New York and Chicago Limited Express, stop at Cresson during the season.—[*Adv.*]

When baby was sick, we gave her Castoria,
When she was a Child, she cried for Castoria,
When she became Miss, she clung to Castoria,
When she had Children, she gave them Castoria.—[*Adv.*]

ADVICE TO MOTHERS.

Mrs. Winslow's Soothing Syrup should always be used for children teething. It soothes the child, softens the gums, allays all pain, cures wind colic, and is the best remedy for diarrhœa. 25c. a bottle.—[*Adv.*]

"BROWN'S HOUSEHOLD PANACEA,"
The Great Pain Reliever,
For Internal and External Pains, Rheumatism, Pain in Stomach, Bowels, or Side, Colic, Diarrhœa, Colds, Sprains, Burns, Scalds, Cramps, and Bruises, 25c. a bottle.—[*Adv.*]

CORNELL'S BENZOIN COSMETIC SOAP
Keeps the skin soft, white, and healthful. 25 cents. All Druggists, or P. O. Box 2148, New York.—[*Adv.*]

The Best Worm Lozenges for Children are Brown's Vermifuge Comfits, 25c. a box.—[*Adv.*]

The use of Angostura Bitters excites the appetite and keeps the digestive organs in order.—[*Adv.*]

The inestimable value of Ayer's Sarsaparilla as a blood purifier should be known to every wife and mother. It corrects irregularities, gives tone and strength to the vital organs, and cleanses the system of all impurities. The best family medicine.—[*Adv.*]

HARPER'S WEEKLY.

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Front Cover Page, per line, each insertion	$1 75
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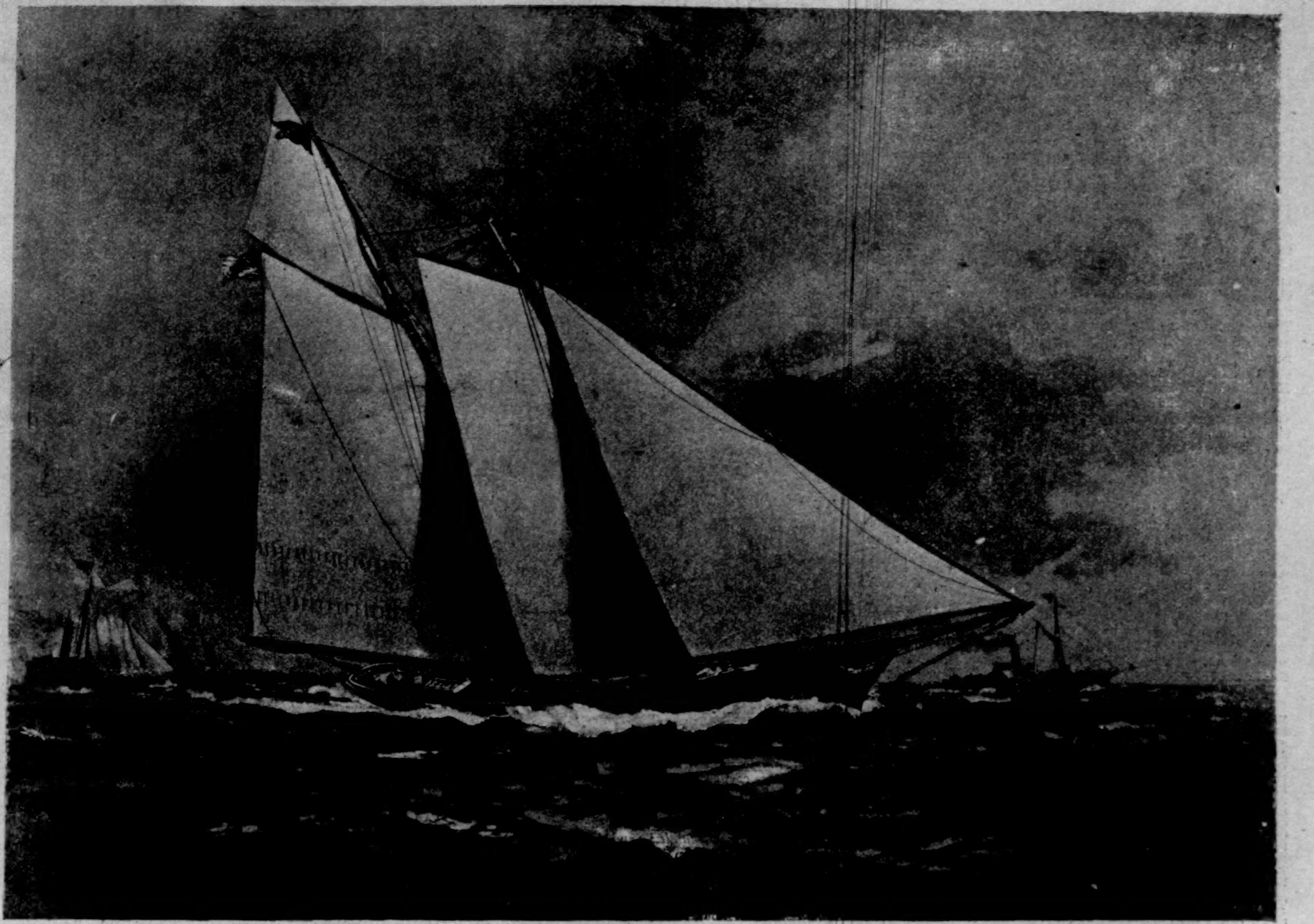


THE *AMERICA* WINNING THE CUP, AUGUST 22, 1851.

THE "AMERICA'S" CUP.

BY W. J. HENDERSON.—ILLUSTRATIONS BY FRANK H. SCHELL.

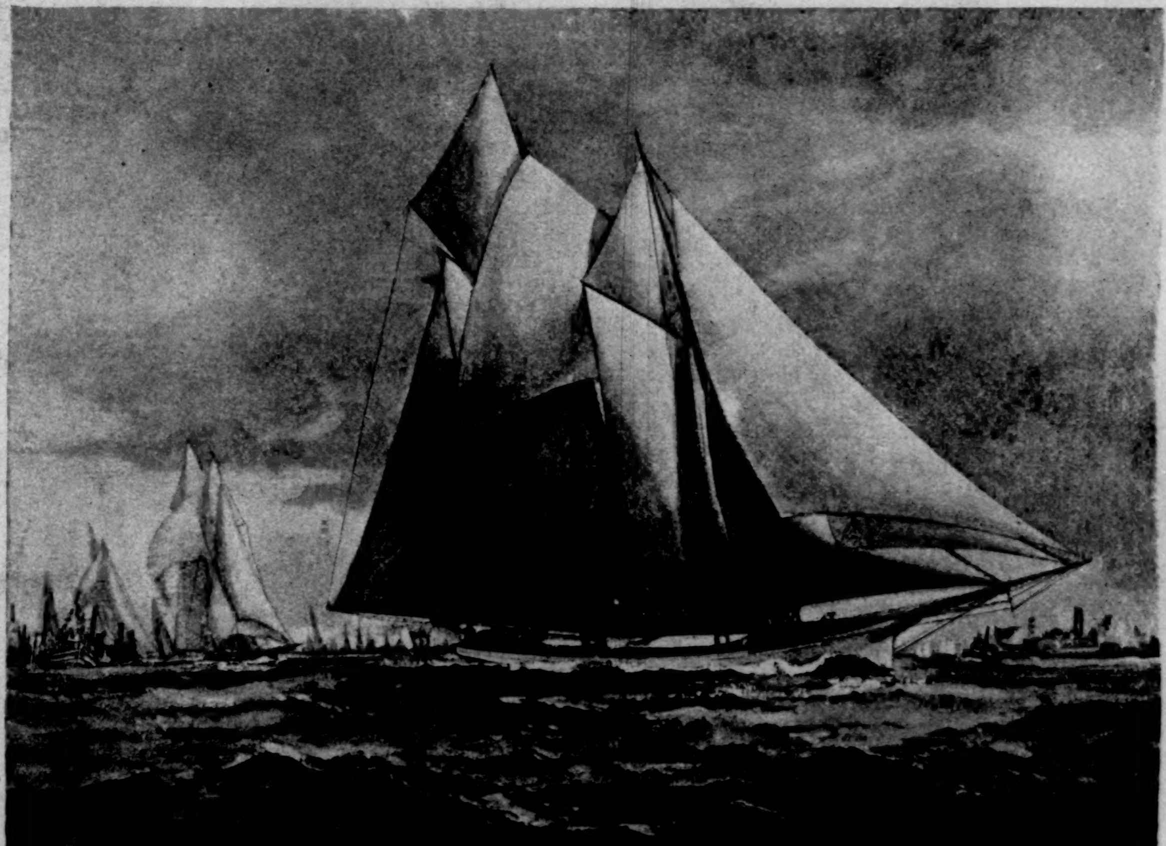
IT was in 1851 that the schooner-yacht *America*, designed and built by the celebrated George Steers, sailed for Havre and thence for Cowes. The "World's Fair" was open in London, and the idea had occurred to some Americans that it would be well to exhibit one of our fore-and-aft-rigged vessels. Nothing was known here at the time about the cup offered by the Royal Yacht Squadron for yachts of all nations. When the *America* arrived at Cowes her owners posted in the club-house a challenge to sail the schooner against any British yacht for from one to ten thousand guineas. No attention was paid to this challenge, though one match of twenty miles to windward and return, with the schooner *Titania*, for £100 was made. The Americans declined to regard her as a representative vessel, and still asked for a national match. They were simply referred to the regatta of August 22d, in which the *America* could be entered. The owners of the yacht decided to bring her home, but through the earnest advice of English and American friends they were induced to enter her. These facts are taken from the written statement of the schooner's only surviving owner, George L. Schuyler, published in the late Captain R. F. Coffin's history of the *America's* Cup. Mr. Schuyler's brief and graphic story of the famous race is as follows:

"Here are the entries for this regatta. No allowance of time for tonnage; yachts to start at 10 A.M. from Cowes and sail round the Isle of Wight. No time prescribed for accomplishing the distance, so that the cup might be won in a tempest or a drift—with entries ranging from 392 to 47 tons.

Name.	*Class.*	*Tons.*	*Owners.*
Beatrice	Schooner	161	Sir W. P. Carew.
Volante	Cutter	48	J. L. Cragie.
Arrow	"	84	T. Chamberlayne.
Wyvern	Schooner	205	Duke of Marlborough.
Ione	"	75	A. Hill.
Constance	"	218	Marquis of Conyngham.
Titania	"	100	R. Stephenson.
Gypsy Queen	"	160	Sir H. B. Hoghton.
Alarm	Cutter	193	J. Weld.
Mona	"	82	Lord A. Paget.
America	Schooner	170	J. C. Stevens and others.
Brilliant	3-masted schooner	392	G. H. Ackers.
Bacchante	Cutter	80	B. H. Jones.
Freak	"	60	W. Curling.
Stella	"	65	R. Frankland.
Eclipse	"	50	H. S. Fearing.
Fernande	Schooner	127	Major Martyn.
Aurora	Cutter	47	T. Le Merchant.

The *Titania*, *Stella*, and *Fernande* did not start. I do not propose unnecessarily to add to the length of this communication by giving any account of the race further than to call attention to three points:

"First. That starting at 10 o'clock with a light westerly wind, at about 11.30, after the yachts had turned No Man's Land buoy and were beating to the westward, the wind freshened to a good six-knot breeze for a short time, at the end of which the *America's* position was two miles to windward of the nearest yacht. The wind then died away, and the yachts beat slowly up under Shanklin Chine with a strong head-tide, the *America* still widening the distance. At 3 o'clock the wind freshened again, and when at 5.40 P.M. the *America*, having carried away her jib-boom, rounded the Needles, the *Aurora* (47 tons, the smallest entry) was, by the best English report of the race, about eight miles astern, and the rest of the squadron were not to be seen. Second. That the wind again becoming light and the tide ahead, the *America* anchored, winner of the cup, at 8.35 P.M.; the *Aurora* at 8.55 P.M."



MAGIC LEADING THE FLEET IN THE UPPER BAY.

The remainder of Mr. Schuyler's story it is not necessary to quote. I desire to call attention to one thing: this trophy is not, as it has been frequently called, the "Queen's Cup." Its correct name is the *America's* Cup, and it was nothing more or less than a regatta prize, won by the old schooner, until July 8, 1857, when J. C. Stevens, E. A. Stevens, Hamilton Wilkes, J. Beekman Finley, and George L. Schuyler, owners of the *America*, presented it to the New York Yacht Club as a perpetual international challenge cup.

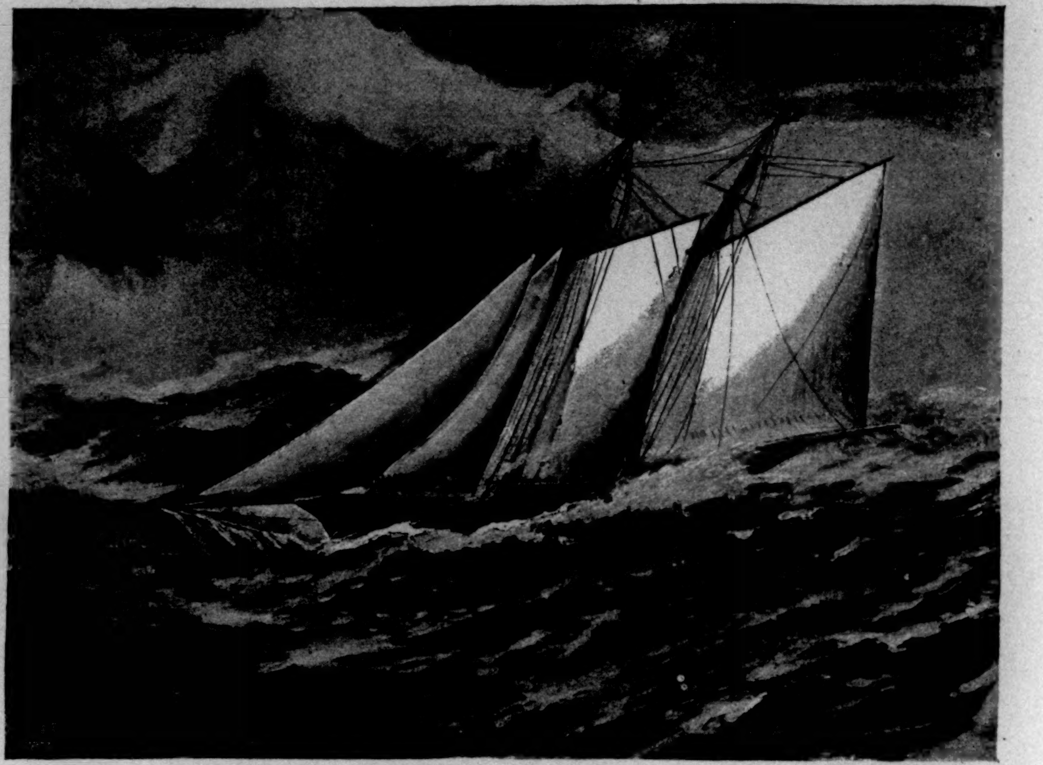
The new holders of the prize remained in quiet, undisputed possession of it until 1868, when, in October, a letter was received from James Ashbury, a member of the Royal Thames Yacht Club, announcing his desire to sail his new schooner *Cambria* for the trophy. Owing to Mr. Ashbury's misunderstanding of the terms on which the cup was offered, he was unable to complete his arrangements with the New York Yacht Club for the season of 1869. In the mean time he had made a match with James Gordon Bennett to sail the *Cambria* against the *Dauntless* across the ocean. The course was from Daunt Head buoy, near the Old Head of Kinsale, to the Sandy Hook Light-ship, and the racers started at 2.20 P.M. on July 4, 1870. The *Dauntless* was commanded by the noted Captain Samuel Samuels, who had been skipper of the victorious *Henrietta* in her race across the ocean with the *Fleetwing* and *Vesta* in 1866. The race was a slow one, but very close. The *Cambria* passed the light-ship at 3.04 P.M. on July 27th, after sailing 2917 miles in 23 days 5 hours and 17 minutes. One hour and 43 minutes later the *Dauntless* arrived, passing the light-ship at 4.47 P.M. The *Dauntless* crossed in 23 days 7 hours, sailing 2963 miles. She was therefore beaten by good navigation rather than speed.

Mr. Ashbury and the New York Yacht Club failed to come to terms, so the challenger accepted the privilege, then included in the deed of gift, of sailing one race under the regular regatta rules of the holders of the cup. Captain Coffin, who saw this race, gives a full account of it, and calls attention to its importance as the only one in which the challenger sailed against a fleet. The race took place on August 8, 1870. The yachts were started from their anchors at 11.26 A.M., on the last of the ebb tide, with a good sailing breeze from south by east to south-southeast, and smooth water. The *Magic* was smartest in setting canvas, and got away from the starting-place, off Stapleton, ahead of the rest. The official record of the race is as follows:

	Finish.			*Elapsed Time.*			*Corrected Time.*		
	H.	M.	S.	H.	M.	S.	H.	M.	S.
Magic	3	34	54	4	07	54	3	58	26.2
Idler	3	37	23	4	11	23	4	09	35.1
Silvie	3	55	12	4	29	12	4	23	45.3
America	3	47	54	4	21	54	4	23	51.4
Dauntless	3	35	28½	4	09	23½	4	29	19.2
Madgie	3	55	07	4	29	07	4	29	57.1
Phantom	3	55	05	4	29	05	4	30	44.5
Alice	4	18	27½	4	52	27½	4	34	15.2
Halcyon	4	03	08	4	37	08	4	00	35.9
Cambria	4	00	57	4	34	57	4	37	38.9
Calypso	4	15	29	4	49	29	4	40	21.3
Fleetwing	4	02	09½	4	36	19½	4	41	20.5
Madeleine	4	14	46	4	48	46	4	42	35.4
Tarolinta	4	10	23	4	44	23	4	47	29.2
Rambler	4	51	35½	4	51	35½	4	48	35.5

The *Magic* beat the second boat, *Idler*, 11 minutes 8.9 seconds, and defeated the *Cambria* by 39 minutes 12.7 seconds. Thus, in the first race for the cup in this country, the challenging yacht finished tenth in a fleet of eighteen starters, the *Tidal Wave*, *Widgeon*, and *Alarm* not completing the course.

Mr. Ashbury was beaten, but not disheartened. He went back to England and ordered a new yacht, the *Livonia*. In arranging for her competition for the cup a great quantity of ink and paper was consumed. The New York Yacht Club held that the *Livonia* must sail against a fleet, as her predecessors had done; but to this Mr. Ashbury stoutly objected. The point was referred to George L. Schuyler, and he decided in favor of Mr. Ashbury, thus establishing the excellent custom of sailing matches instead of regattas for the cup. Mr. Ashbury's next contention was that, as the *Livonia* was authorized to represent eight yacht clubs, she should be accorded the privilege of a series of eight separate consecutive contests for the cup, so that, having lost the cup as the representative of the Royal Albert Yacht Club on Monday, she could sail for it again on Tuesday as the champion of the Royal Yorkshire. It would have been genuinely hard luck if Mr. Ashbury could not have carried the cup home under such an arrangement. However, even English papers ridiculed this demand, and it was not granted.



ASHBURY'S ENGLISH SCHOONER YACHT *CAMBRIA* IN A GALE WITH HOUSED TOPMAST.

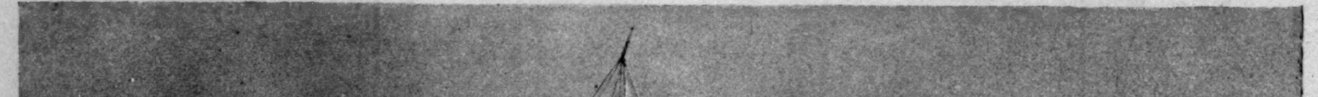
Four vessels were selected to meet the *Livonia*—the *Columbia*, *Palmer*, *Sappho*, and *Dauntless*—and the committee had the right to name any one of them on the morning of a race. This was manifestly unfair. On a light weather day the committee could put in the skimming-dish *Columbia*; in fresh sailing weather, the *Palmer*; in a stiff wind and sea they could start the *Sappho* or *Dauntless*. Mr. Ashbury, who proved to be a most energetic "kicker," opposed this plan, and I believe that it is largely due to him that in our cup contests now one yacht has to be named for the entire series of races.

The first of the *Livonia's* races was against the *Columbia*, on August 16, 1871, over the New York Yacht Club course. The corrected time was, for the *Columbia*, 6 hours 19 minutes 41 seconds, and for the *Livonia* 6 hours 46 minutes 55 seconds, the former winning by 27 minutes 14 seconds. The race was sailed in light weather, and Mr. Ashbury said afterward that it was a foregone conclusion. The second race, on August 18th, was 20 miles to windward from Sandy Hook Light-ship and return. The wind was light at the start, and the *Columbia* was put in. It breezed up to a moderate gale afterward, but the *Columbia* won by 8 minutes. Mr. Ashbury very justly entered a protest on the ground that the *Columbia* had rounded the mark-boat the wrong way, luffing, and thus gaining a great advantage over the *Livonia*, which was jibed around. The skipper of the *Columbia* had been informed that he could round as he pleased. The captain of the *Livonia* had not been so instructed, and he followed the English racing custom of keeping the mark on the starboard hand. Mr. Ashbury did not claim the contest, but wanted it declared no race. His request was a fair one, and ought to have been granted, but the committee refused it.

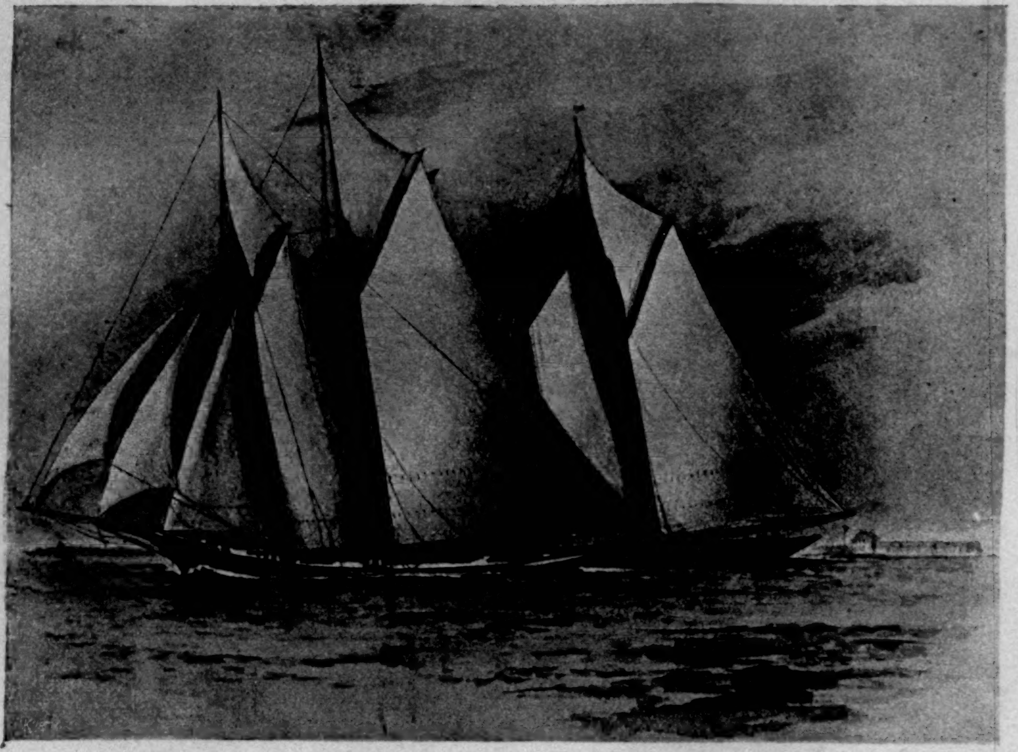
The third race was again with the *Columbia*, and over the club course. The *Columbia* parted her flying-jib stay and broke her steering gear, losing the race by 15 minutes 10 seconds, so that the *Livonia* achieved the distinction of being the only challenger that has ever won a single race in the contests for the *America's* Cup. The *Livonia's* fourth race was against the *Sappho*, October 21st, 20 miles to windward and return. The *Sappho* won by 30 minutes 21 seconds. The final race was sailed on October 23d, over the club course, and the *Sappho*, after running through the *Livonia's* lee almost at the start, again won by 25 minutes 27 seconds. Mr. Ashbury had a long war of words with the New York Yacht Club, and accused the organization of unfair and unsportsmanlike conduct. The club responded by deciding to have nothing further to do with him, and he disappeared from international yachting contests.

Several years elapsed before another challenger appeared. In 1876 Vice-Commodore Charles Gifford, of the Royal Canadian Yacht Club, sent to Secretary Minton, of the New York Yacht Club, a challenge, naming the schooner *Countess of Dufferin*, and requesting the holders of the cup to waive the required six months' notice. At a special meeting of the New York Yacht Club on April 20th the challenge was accepted. Of all the confident persons who have come to New York to get the cup, undoubtedly the yachtsmen aboard that Canadian schooner were the most disappointed. The schooner made her first public appearance here in the Brenton's Reef Cup race, which began July 27, 1876. This is a race for a cup given by James Gordon Bennett, from the Brenton's Reef Light-ship, off Newport, to and around the Sandy Hook Light-ship and return. It is usually sailed, however, with the start and finish at the New York end of the course. Captain Coffin records that the *Countess of Dufferin's* people were so confident that they started to accompany the racers over the course without setting top-sails. They soon discovered their mistake, and by adding their upper canvas managed to keep up with the rear of the procession in the run to the eastward. As soon as the fleet rounded the Brenton's Reef Light-ship and turned to windward, the *Countess* fell astern and was left out of sight. Her owners, on reaching New York, promptly ordered a full set of new balloon canvas.

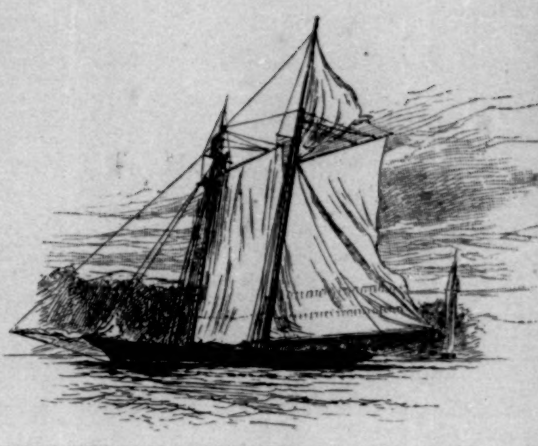
The schooner *Madeleine* was selected by the New York Yacht Club as the cup defender. Her record was a fine one, and she was well manned. The first race was sailed on August 11th, over the club course, with a southerly wind. The *Madeleine* gained steadily from start to finish. The official record follows:



SAPPHO RUNNING HOME IN *LIVONIA* RACE OF OCTOBER 23, 1871.



SAPPHO PASSING *LIVONIA* IN THE LOWER BAY, OCTOBER 23, 1871.



LIVONIA PREPARING FOR START WITH *SAPPHO*, OCTOBER 23, 1871.

	Start.			*Finish.*			*Elapsed.*			*Corrected.*		
	H.	M.	S.	H.	M.	S.	H.	M.	S.	H.	M.	S.
Madeleine............	11	16	31	4	41	26	5	24	55	5	23	54
Countess of Dufferin..	11	17	06	4	51	59	5	34	53	5	34	53

The second race took place on August 12th, the course being twenty miles to windward, south-southeast from Buoy 5, off the point of the Hook and return. The *Countess* was sailed by the crack skipper Capt. Joe Elsworth, but he could not force her to do more than there was in her. The race was uninteresting, the *Madeleine* gaining from start to finish. The *America* went over the course, and was timed by courtesy of the regatta committee. She also beat the *Countess*. The following are the official figures:

	Start.			*Finish.*			*Elapsed.*			*Corrected.*		
	H.	M.	S.	H.	M.	S.	H.	M.	S.	H.	M.	S.
Madeleine............	12	17	24	7	37	11	7	19	47	7	18	46
Countess of Dufferin..	12	17	58	8	03	58	7	46	00	7	46	00
America............	12	22	09	7	49	00	7	26	51	7	26	51

Thus the *Madeleine* beat the *Countess* 27 minutes 14 seconds, and the *America* beat her 19 minutes 9 seconds.

Captain Cuthbert, the designer of the *Countess of Dufferin*, came forward once more in 1881, when he designed and built the centre-board sloop *Atalanta*, at Belleville, Ontario. After three trial races the iron sloop *Mischief* was selected to meet this new challenger, which arrived here by way of the Erie Canal and the Hudson River on October 30th. This voyage of the *Atalanta* led to the insertion of this clause in the deed of gift of the cup, "Vessels selected to compete for this cup must proceed under sail on their own bottoms to the port where the contest is to take place." The *Atalanta's* first race was sailed in a fine breeze over the club course on November 9, 1881, the *Gracie* going over the course and beating both contestants. In fact, the whole interest of the day, after the start, centred in the contest between the two New York yachts. The record is as follows:

	Start.			*Finish.*			*Elapsed.*			*Corrected.*		
	H.	M.	S.	H.	M.	S.	H.	M.	S.	H.	M.	S.
Mischief...........	11	14	50	3	31	59	4	17	09	4	17	09
Atalanta...........	11	15	51	4	04	15¼	4	48	24¼	4	45	29¼
Gracie.............	11	25	00	3	30	46	4	05	46	4	05	46

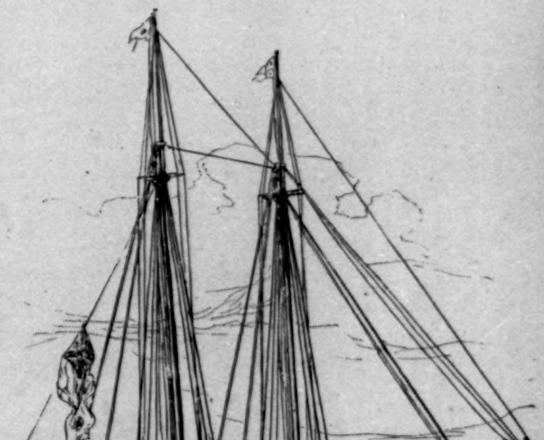
Thus the *Mischief* beat the *Atalanta* 28 minutes, 20¼ seconds. The second race, which was the final one as usual, was sailed on November 10th. The wind was west by north, a fresh breeze, and the course was sixteen miles to leeward from Buoy 5 and return. This time the *Mischief* beat both *Atalanta* and *Gracie*. The Canadian did well in the leeward work, but she had not a ghost of a chance after the outer mark was rounded. The beat home was made by the New York boats under single-reefed mainsails; the *Atalanta* put in two reefs. The record of the race follows:

	Start.			*Finish.*			*Elapsed.*			*Corrected.*		
	H.	M.	S.	H.	M.	S.	H.	M.	S.	H.	M.	S.
Mischief...............	11	58	17	4	53	10	4	54	53	4	54	53
Atalanta......	11	58	47	5	35	19	5	36	32	5	33	47
Gracie................	12	08	30	5	03	15	4	54	45	4	59	31

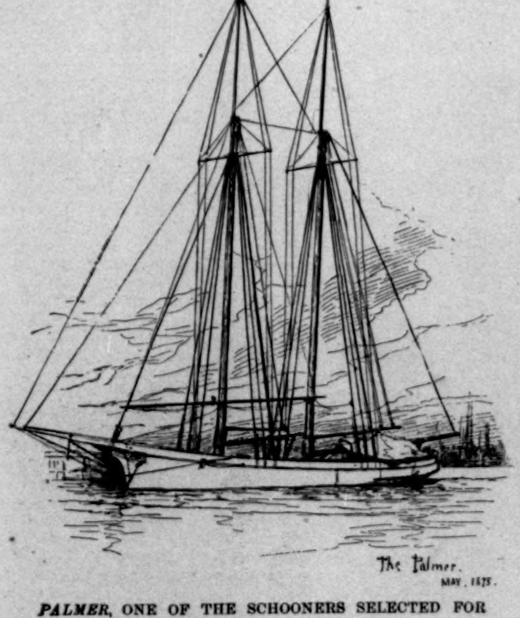
The *Mischief* beat the *Atalanta* 38 minutes 54 seconds, and the *Gracie* beat her 34 minutes 16 seconds.

The New York Yacht Club now decided that the old deed of gift was inadequate, and returned the cup to George L. Schuyler, the only surviving donor, who once more made it over to the club with a new deed. Copies of this document were sent to all foreign yacht clubs; and the Canadians, who had talked of challenging again, declined to do so. The only change, however, was the insertion of the clause designed to prevent competing yachts from being brought here on the decks of steamers or by way of canals.

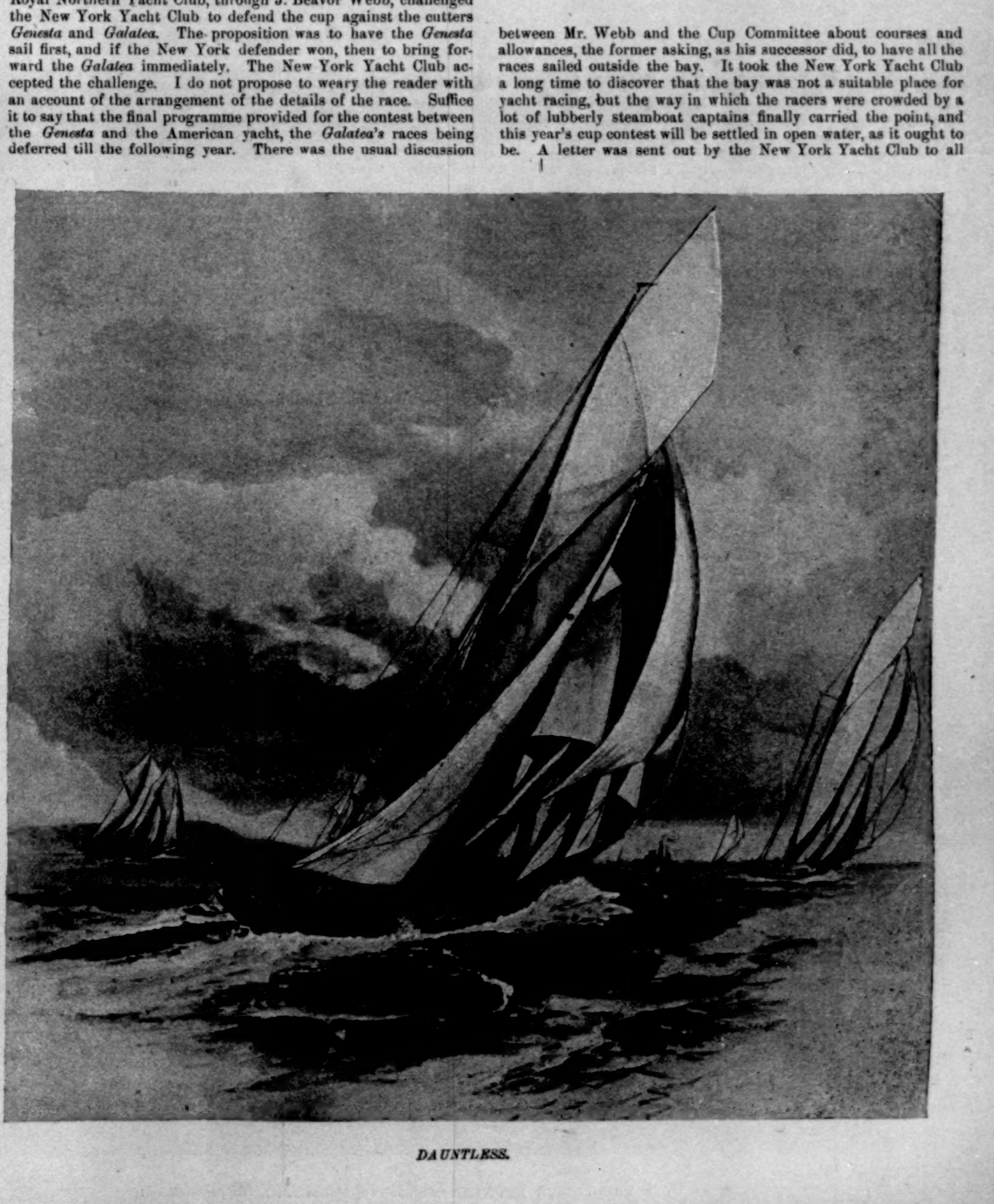
On February 26, 1885, the Royal Yacht Squadron and the Royal Northern Yacht Club, through J. Beavor Webb, challenged the New York Yacht Club to defend the cup against the cutters *Genesta* and *Galatea*. The proposition was to have the *Genesta* sail first, and if the New York defender won, then to bring forward the *Galatea* immediately. The New York Yacht Club accepted the challenge. I do not propose to weary the reader with an account of the arrangement of the details of the race. Suffice it to say that the final programme provided for the contest between the *Genesta* and the American yacht, the *Galatea's* races being deferred till the following year. There was the usual discussion between Mr. Webb and the Cup Committee about courses and allowances, the former asking, as his successor did, to have all the races sailed outside the bay. It took the New York Yacht Club a long time to discover that the bay was not a suitable place for yacht racing, but the way in which the racers were crowded by a lot of lubberly steamboat captains finally carried the point, and this year's cup contest will be settled in open water, as it ought to be. A letter was sent out by the New York Yacht Club to all



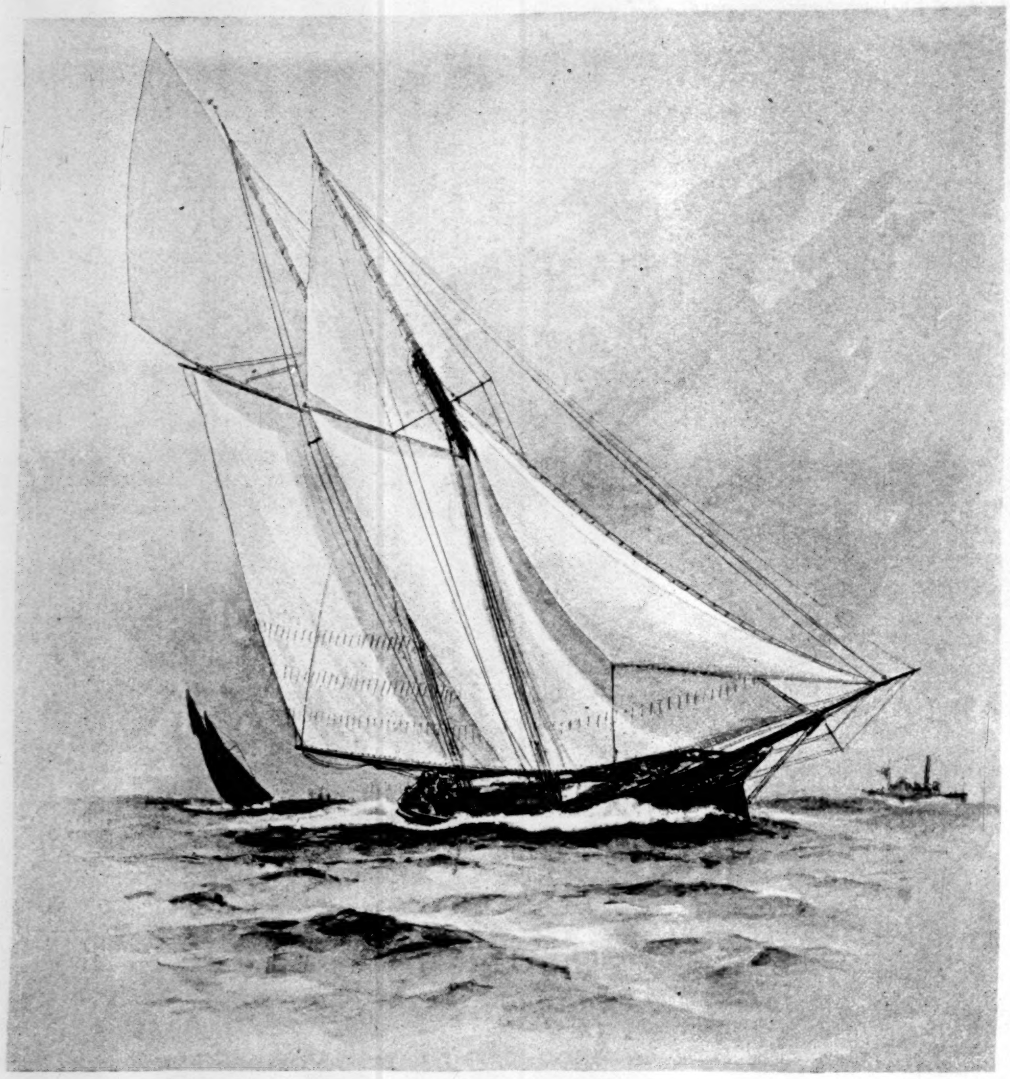
COUNTESS OF DUFFERIN ANCHORED OFF STAPLETON.



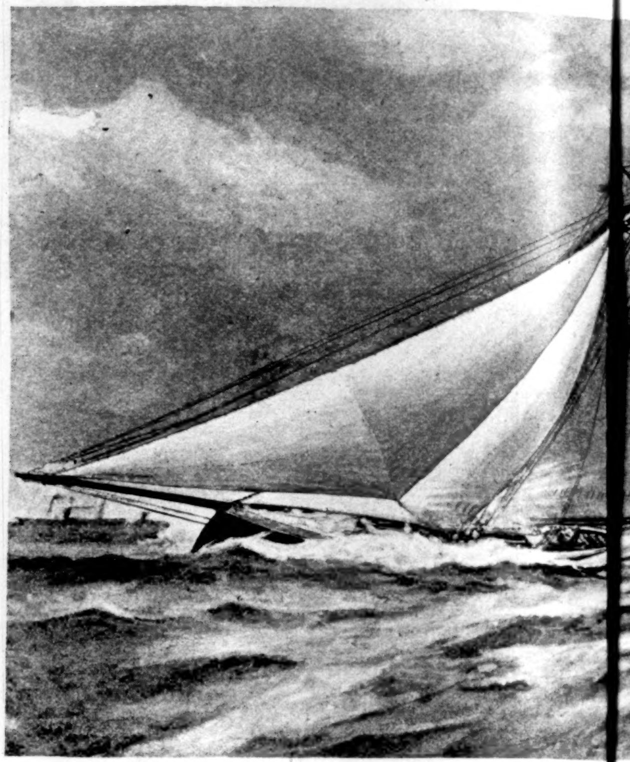
PALMER, ONE OF THE SCHOONERS SELECTED FOR *LIVONIA* RACE.



DAUNTLESS.



COLUMBIA.

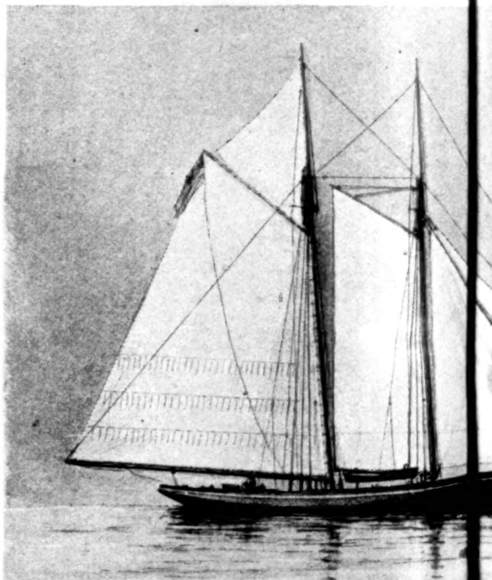


PURITAN AND *GENEST*

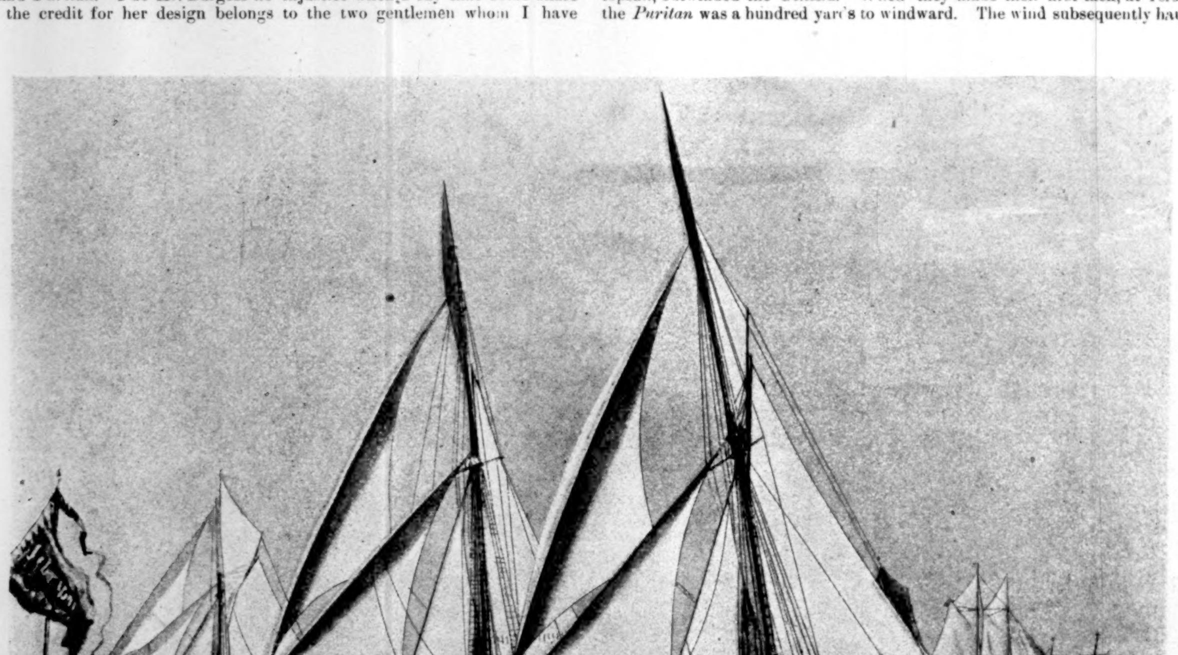
yachting organizations in this country, inviting them to enter competitors in the trial races. One clause in this letter stipulated that the committee reserved the right of forming its own judgment as to the fitness of any entry for the purpose in view, irrespective of the actual result of the races. This point is worth bearing in mind: The best boat does not always win, and the club still has the right to select a beaten boat, if it is deemed desirable.

James Gordon Bennett, commodore, and W. P. Douglass, vice-commodore, of the New York Yacht Club, resolved to build a yacht about the size of the *Genesta*, for at the time there was no single-sticker larger than the *Gracie* in this country. For these two gentlemen A. Cary Smith designed, and the Harlan and Hollingsworth Company built, the iron centre-board sloop *Priscilla.* About the same time several Boston gentlemen, chief among whom were the now famous yachtsmen General Charles J. Paine, J. Malcolm Forbes, and Edward Burgess, put their heads together and evolved the design of the grand *Puritan.* I do Mr. Burgess no injustice when I say that some share of the credit for her design belongs to the two gentlemen whom I have named with him. The *Puritan* was built by G. Lawley and Sons, of Boston, and many enthusiastic admirers still believe her to be the best sloop afloat in all weathers. The *Priscilla* was a fast yacht, but the *Puritan* was faster, and when they first came together in a heavy wind and sea off Newport, the latter won the Goelet Cup. The two sloops subsequently sailed three trial races at this port. The *Puritan* won the first and third; the *Priscilla* the second. The *Puritan*, having proved to be the better all-around boat, was wisely chosen to defend the cup.

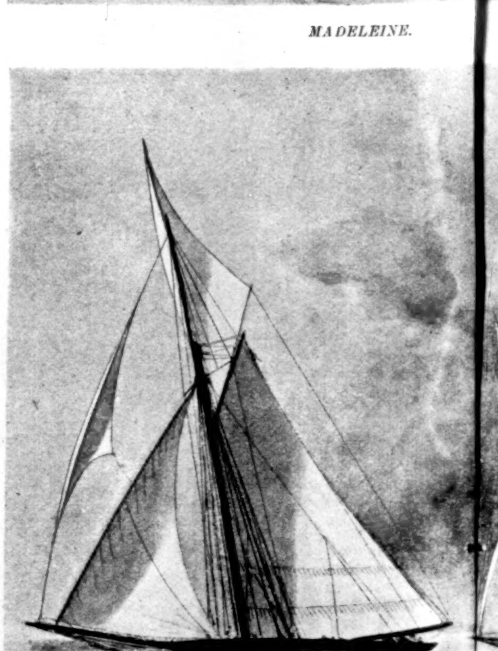
The *Puritan* and *Genesta* first met on September 7, 1885, but light winds prevented them from making a race. Another attempt was made the next day, but the *Puritan* fouled the *Genesta* at the start, and carried away the latter's bowsprit. The judges promptly ruled out the *Puritan*, and gave Sir Richard Sutton the privilege of sailing over the course and taking the race. With true English sportsmanlike spirit, he declined to avail himself of this right. The first race was sailed over the New York Yacht Club course on Monday, September 14th. The wind at the start was southeast, very light, and the tide on the last quarter of the flood. The preparatory signal was given at 10.25 A.M., and both yachts were handicapped at 10.32. It was dead to windward through the Narrows, and the *Puritan*, by not setting a jib-topsail, outwinded the *Genesta.* When they made their first tack, at 10.37, the *Puritan* was a hundred yards to windward. The wind subsequently haul-



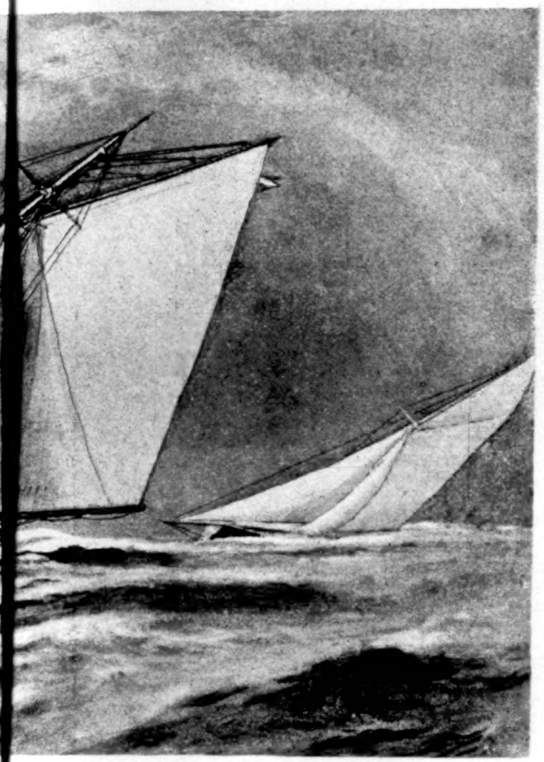
MADELEINE.



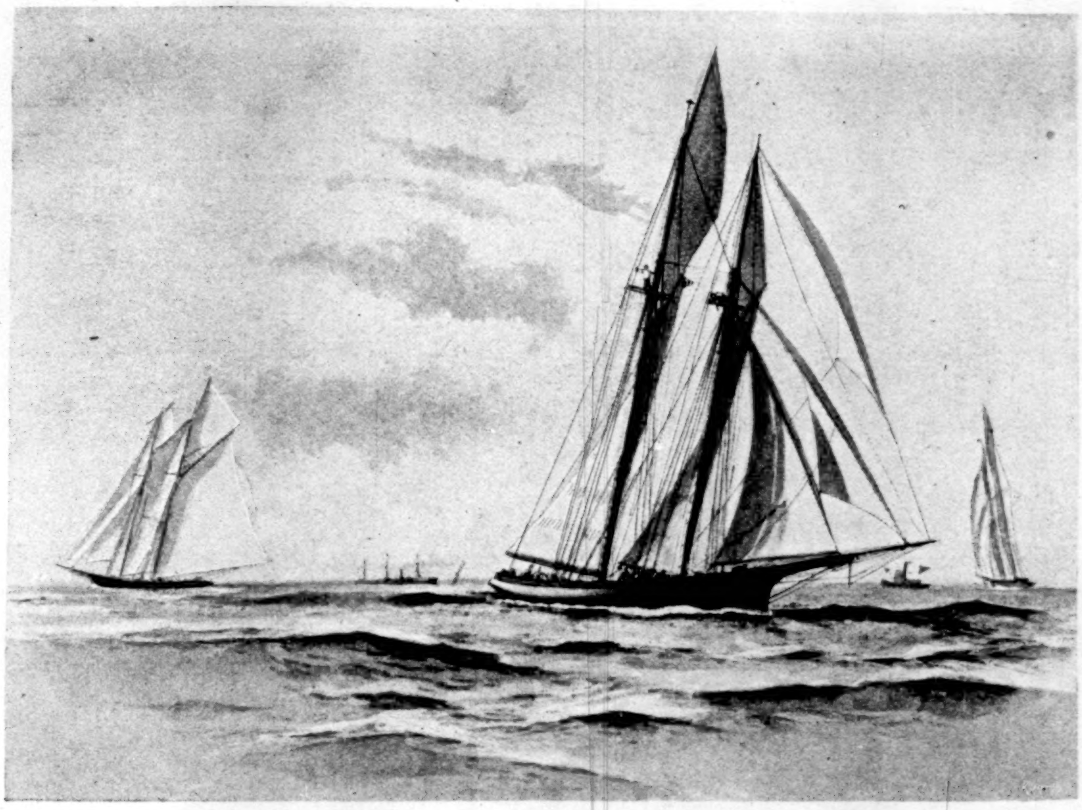
TRIAL RACE BETWEEN *ATLANTIC, PURITAN,* AND *PRISCILLA.*



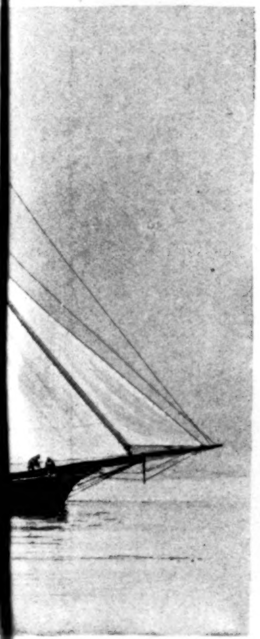
MISCHIEF BEATING *ATALAN*



N A SQUALL.



RACE OVER INSIDE COURSE BETWEEN *COUNTESS OF DUFFERIN* AND *MADELEINE*. *COUNTESS* NEARING SANDY HOOK LIGHT-SHIP. *MADELEINE* RUNNING HOME.

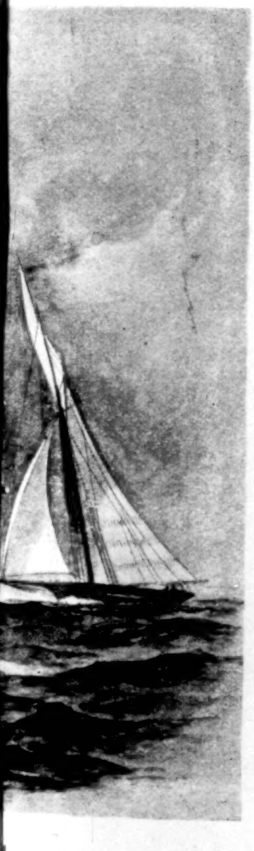


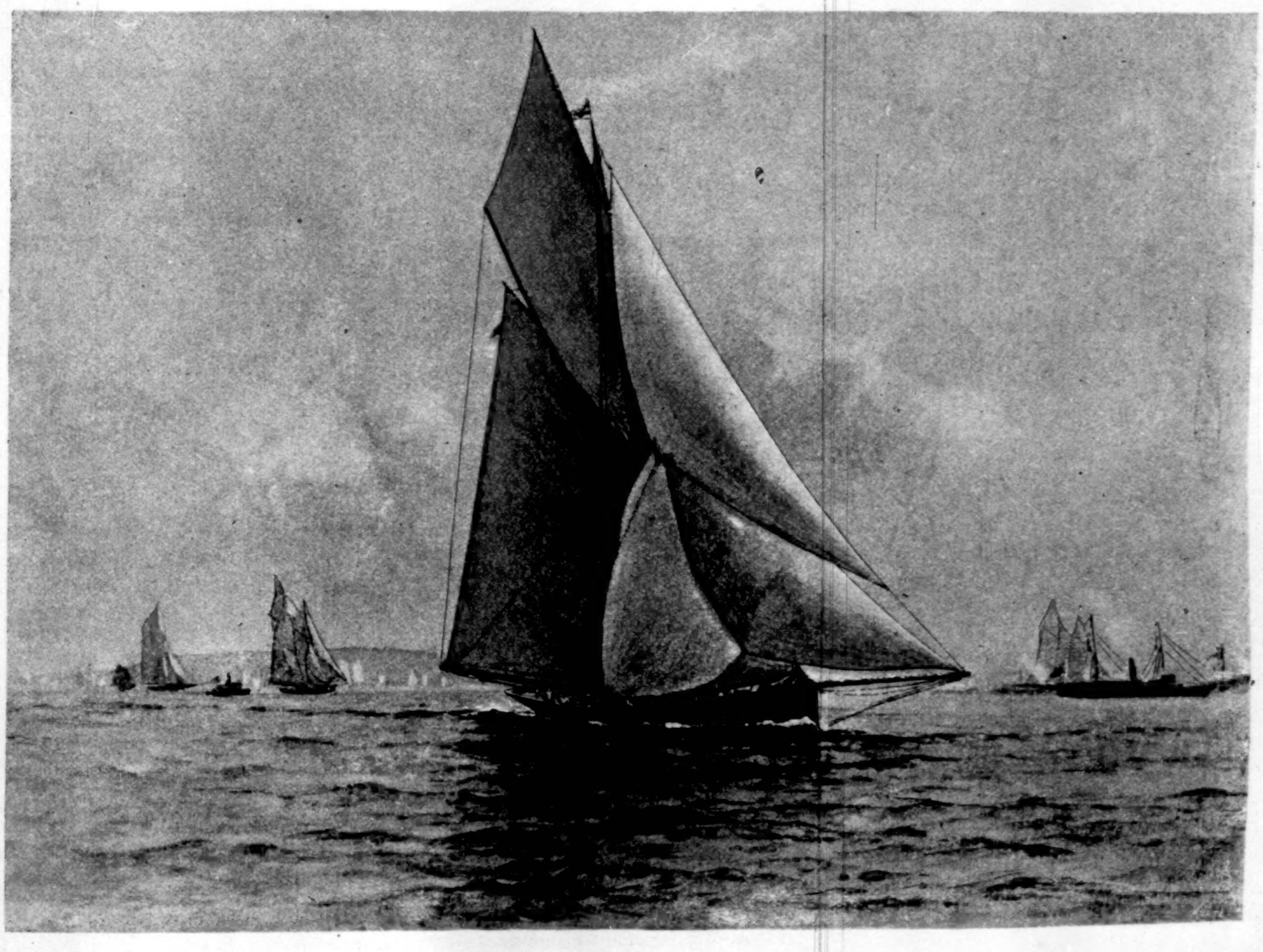
ed to the southwest, and the *Puritan*, passing through the Narrows ahead of her opponent, got the breeze first and obtained a commanding lead. The steamboat men, who have always treated the racing yachts with scant courtesy, now began to annoy the *Genesta*. The two yachts had all kinds of baffling winds going down the bay, but finally rounded Buoy 10 as follows: *Puritan*, 1.16.22; *Genesta*, 1.19.25. The *Puritan* had gained 3 minutes 3 seconds on the *Genesta* in the beat down.

As soon as the yachts passed outside the Hook they got a good breeze. It was the old story—plenty of racing weather outside, but only calms on the New York Yacht Club's favorite drifting ground inside. The *Puritan* rounded the Sandy Hook Light-ship at 2.14.54; the *Genesta* at 2.19.16. The *Puritan* had made the run out in 58 minutes 32 seconds, and the *Genesta* in 59 minutes 51 seconds, the Boston sloop gaining 1 minute 19 seconds. The distance is about $8\frac{3}{4}$ nautical miles. Going back, the yachts had their sheets lifted a little, but the tide was against them. The *Puritan* rounded Buoy 10 at 3.38.05, and the *Genesta* at 3.46.05, the former having gained 3 minutes 38 seconds on the reach in. The finish up the bay was made with a very light wind on the quarter, and a strong opposing tide. The *Puritan* gained 8 minutes 47 seconds on her opponent in the run up. The following is the official record of the race:

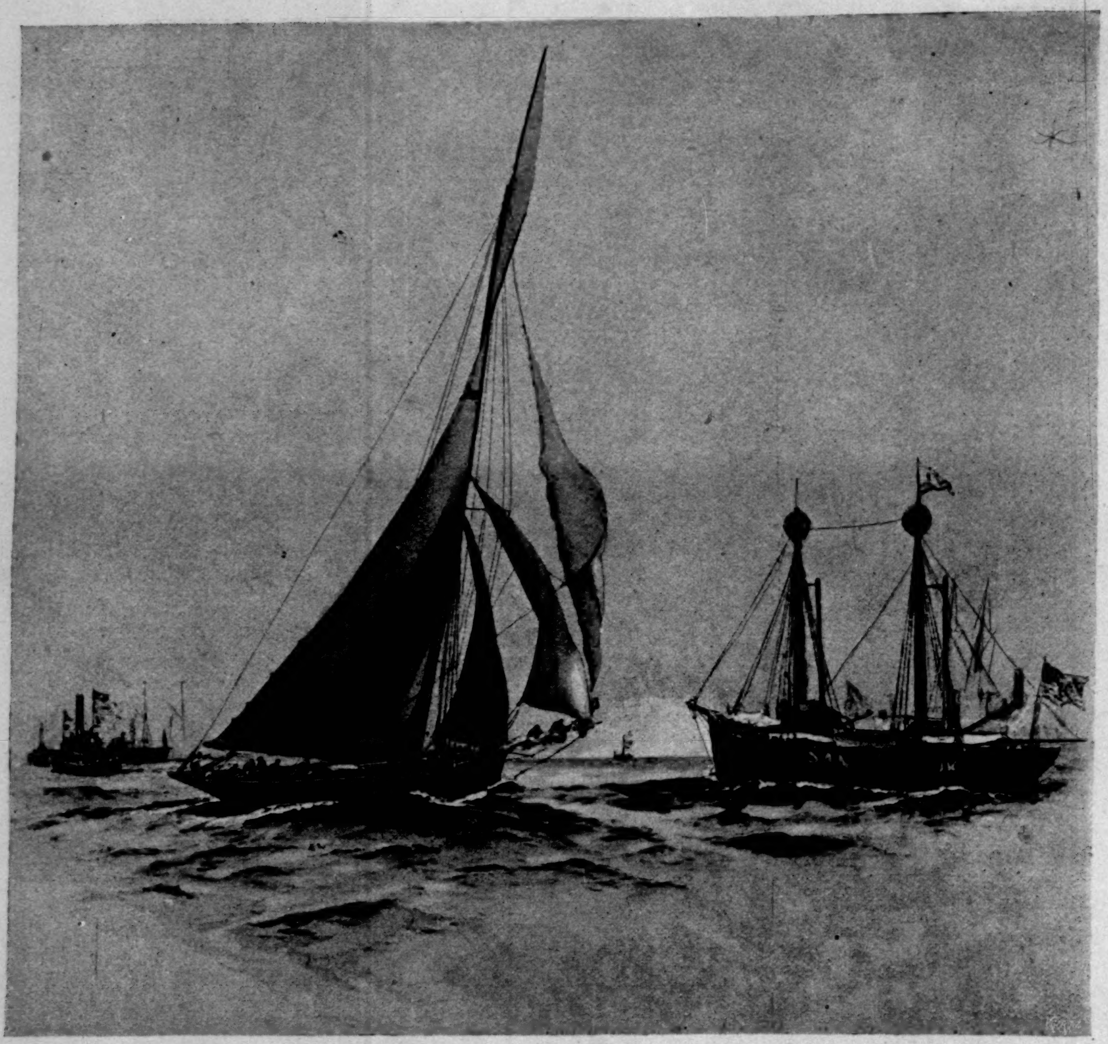
	Start.			*Finish.*			*Elapsed.*			*Corrected.*		
	H.	M.	S.	H.	M.	S.	H.	M.	S.	H.	M.	S.
Puritan	10	32	00	4	38	05	6	06	05	6	06	05
Genesta	10	32	00	4	54	52	6	22	52	6	22	24

Thus the *Puritan* beat her opponent 16 minutes 47 seconds actual time, and 16 minutes 19 seconds corrected time. The second race was sailed 20 miles to leeward and return on Wednesday, September 16th, in a fresh wind from west-northwest, which at one time blew 37 miles an hour. Beaufort's scale rates a wind of from 28 to 40 miles an hour as a fresh gale, and calls for three reefed top-sails on a ship. The *Puritan's* people made that day the only mistake I have ever seen made on any yacht that had General Paine aboard. They set their spinnaker on the wrong side. Being anxious to avoid jibing at the outer mark, they boomed their main-sail out to port and set their spinnaker to star-board. The *Genesta* followed suit; but before she had gone far she took in her spinnaker, jibed her mainsail to starboard, and set her spinnaker to port. The mainsail did far better work on this side, and the *Genesta* walked past the *Puritan*, beating her to the outer mark 2 minutes 6 seconds. The *Genesta* rounded at 1.05.30, and the *Puritan* at 1.07.36. On the beat in, with a freshening wind, the *Genesta* made a mistake. She carried a working top-sail, which did her no good, but, on the contrary, caused her to bury herself too much. The *Puritan* housed her top-mast and went to windward beautifully. When both yachts were about three miles from the outer mark, bound in, both being on the port tack, the *Puritan* a mile nearer the Long Island shore than her opponent, the wind shifted a little farther northward. Both yachts at once tacked and laid their courses for the finish. My brother yachting writers held that this was an advantage to the *Genesta*, because it put the *Puri-*





GENESTA RUNNING HOME.



GALATEA ROUNDING SANDY HOOK LIGHT-SHIP IN FIRST RACE WITH *MAYFLOWER.*

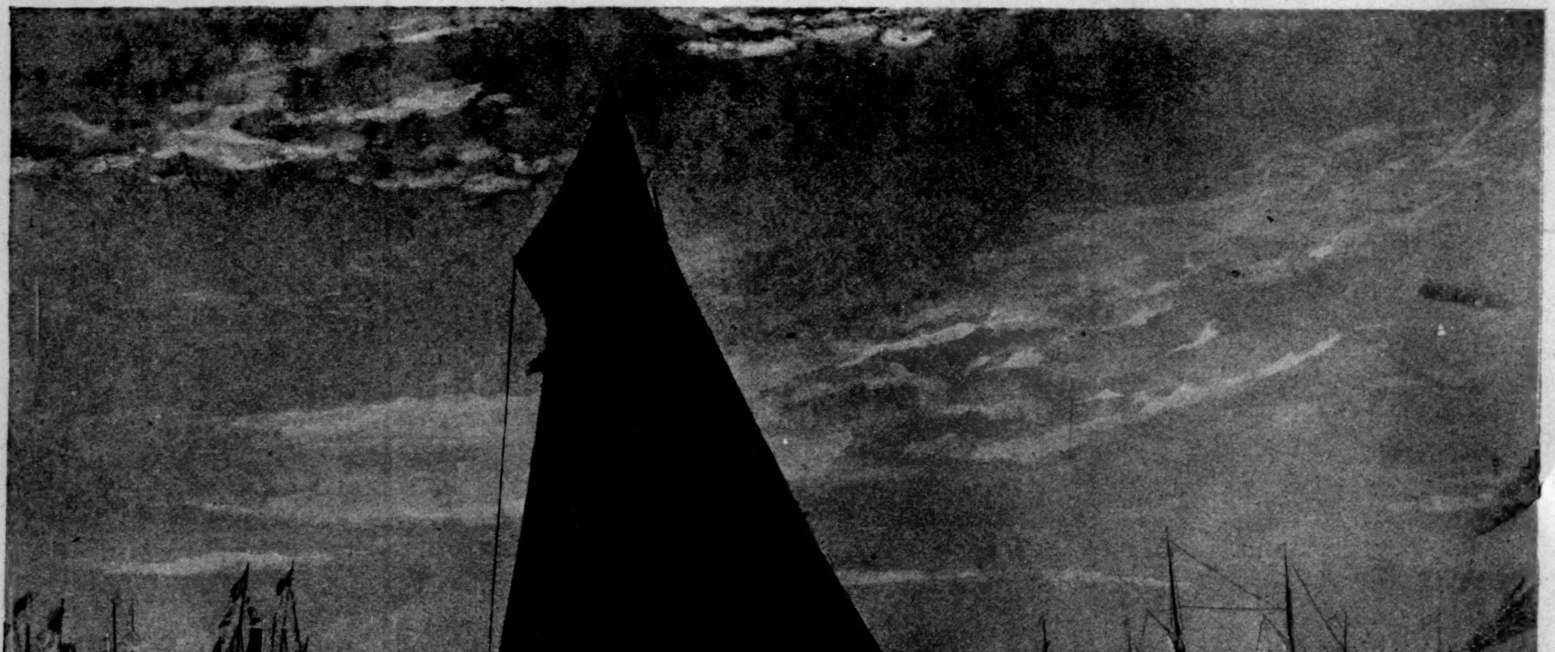
tan a mile farther to windward than she needed to be, and gave her a longer distance to sail, while the *Genesta* was on the shortest possible course to the Light-ship. I have never been able to agree with this view. The *Genesta* certainly did lay her course, but she was as close to the wind as she could go. Allowing the *Genesta* to have been from 15 to 17 miles from the finish, and the *Puritan* one mile to windward of her, the latter must have sailed not more than three-eighths of a mile farther, but she laid a course which gave her the wind half a point freer. Any sailor will admit that this is a very great advantage. It certainly proved to be so with the *Puritan*, for after getting on even terms with her opponent, she lifted sheets, kept away, and ran down in front of the *Genesta*, holding that position till the line was crossed, and winning the race and cup by 1 minute 38 seconds. The following are the official figures:

	Start.			*Finish.*			*Elapsed.*			*Corrected.*		
	H.	M.	S.	H.	M.	S.	H.	M.	S.	H.	M.	S.
Puritan..	11	06	01	4	09	15	5	03	14	5	03	14
Genesta..	11	05	16	4	10	39	5	05	23	5	04	52

The following season preparations were made to meet Lieutenant Henn's steel cutter *Galatea*, also designed by J. Beavor Webb. The wooden centre-board sloops *Atlantic* and *Mayflower* were built. The former was designed by Philip Elsworth for a syndicate of members of the Atlantic Yacht Club. The latter was designed by Edward Burgess for General C. J. Paine, of Boston. The *Mayflower* did not make a good showing in the early regattas. Her mast and boom were taken out and reduced in diameter; some of her inside ballast was removed, and more lead put on her keel. After that she showed her true pace. The *Atlantic* was a failure from start to finish as compared with the Burgess yachts; but she could have beaten the *Galatea*, and, in fact, always did when they subsequently met in the regattas of 1887. Two trial races were sailed to select the cup defender of 1886, the starters being the *Mayflower*, *Puritan*, *Priscilla*, and *Atlantic*. The *Puritan* had been purchased by J. Malcolm Forbes, of Boston, and the *Priscilla* by A. Cass Canfield, Commodore of the Seawanhaka-Corinthian Yacht Club, of this city. The first trial race took place on August 21st, over the New York Yacht Club course, with a moderate south-easterly wind.

The *Mayflower* defeated the *Atlantic* by 10 minutes 51 seconds. The second trial race was sailed 15 miles to leeward, south-southwest, and return from the *Scotland* Light-ship. The breeze was moderate and the sea comparatively smooth. The starting signal was given at 12.04, and two of the yachts were handicapped, the *Priscilla* by 20 seconds, and the *Mayflower* by 2 minutes 26 seconds. The yachts started before the wind under spinnakers. At 1.03 the *Puritan* rolled her spinnaker-boom under water and carried it away. A few minutes later, however, the mark-boat was found to be a little to windward of the course, and the *Puritan*, hauling up, was able to do well without her spinnaker. Going back from the outer mark the yachts did not have their work dead to windward, but were nevertheless well tested in sailing close-hauled. The *Mayflower* fully proved her superiority. In the windward work she beat the *Puritan* 4 minutes 41 seconds; *Atlantic*, 9 minutes 2 seconds; *Priscilla*, 7 minutes 10 seconds. The Cup Committee announced immediately after the race that the *Mayflower* had been selected to meet the *Galatea*.

The first race between the *Mayflower* and the *Galatea* took place on September 7, 1886, over the New York Yacht Club course. The wind was from south to southeast, light inside the Hook and fair outside. The yachts got away on the starboard tack, the *Galatea* blanketing and passing the *Mayflower* right on the line.



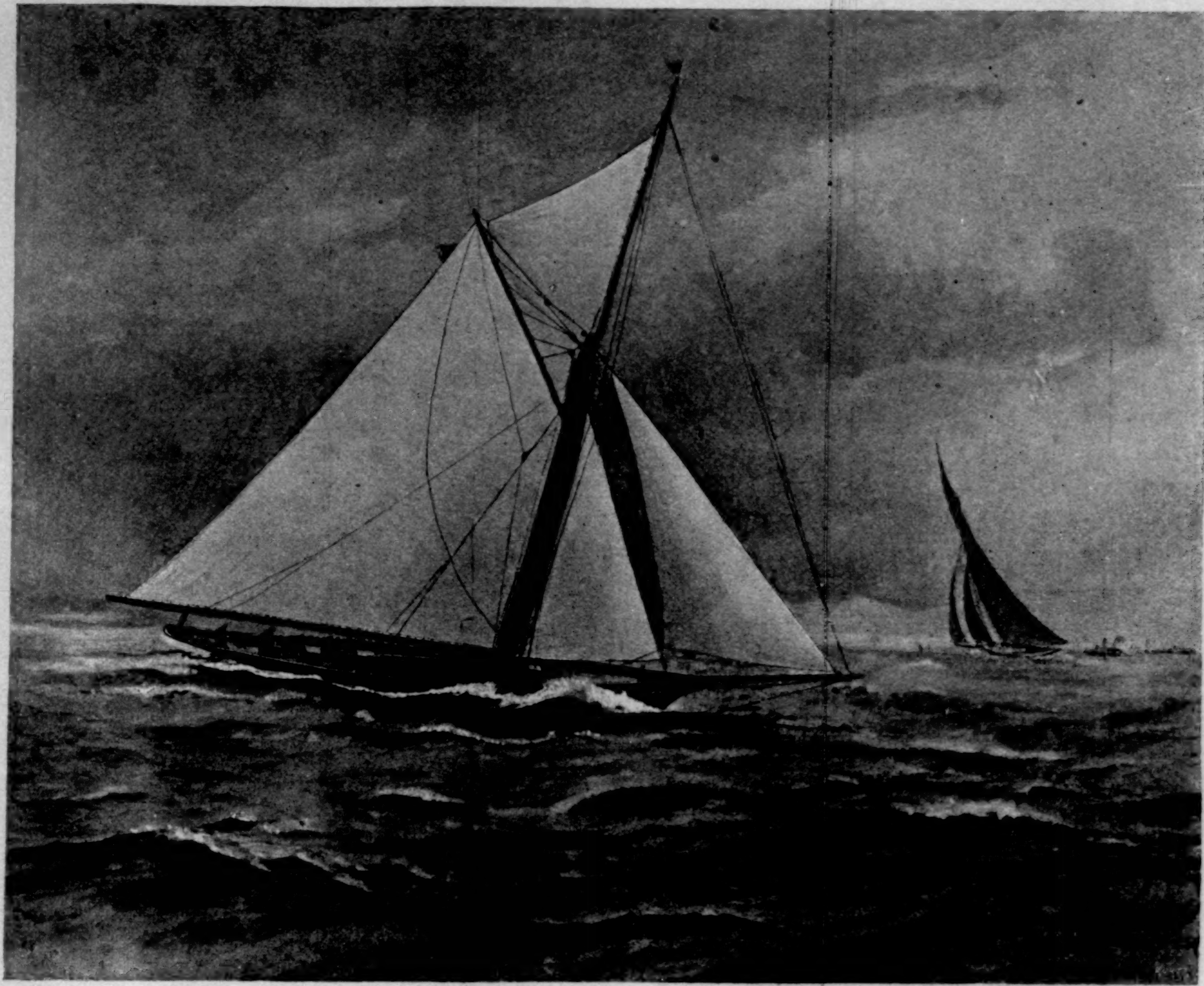
MAYFLOWER WINNING OUTSIDE RACE WITH *GALATEA.*

The *Mayflower* kept away and outfooted the cutter, so that when they tacked under the Long Island shore she had the weatherly position. She continued to walk out to windward of her antagonist from that time, and passed Hoffman Island half a mile ahead. The *Mayflower* rounded the Southwest Spit buoy, No. 8¼, at 1.01.51, and the *Galatea* at 1.07.07. The sloop had gained 5 minutes 16 seconds thus far. It was a long and uneventful reach out to the Sandy Hook Light-ship, with a light breeze. The *Mayflower* rounded at 2.35.02, and the *Galatea* at 2.44.13. The sloop had gained 3 minutes 55 seconds in the reach from Buoy 8¼. Returning over that stretch, the yachts had the wind on the port quarter and moved better. No official time was taken at the buoys inside the Hook on the return. By the time taken by Captain Coffin and myself, the *Mayflower* gybed around Buoy 10 at 3.38, and the *Galatea* at 3.51, the former having gained 3 minutes 49 seconds on the run in. The *Galatea* gained 21 seconds on the *Mayflower* between Buoy 10 and the finish, which gain was wholly due to the fact that the steamboats formed in a solid line behind the *Mayflower* and cut up her wind. The official figures are as follows:

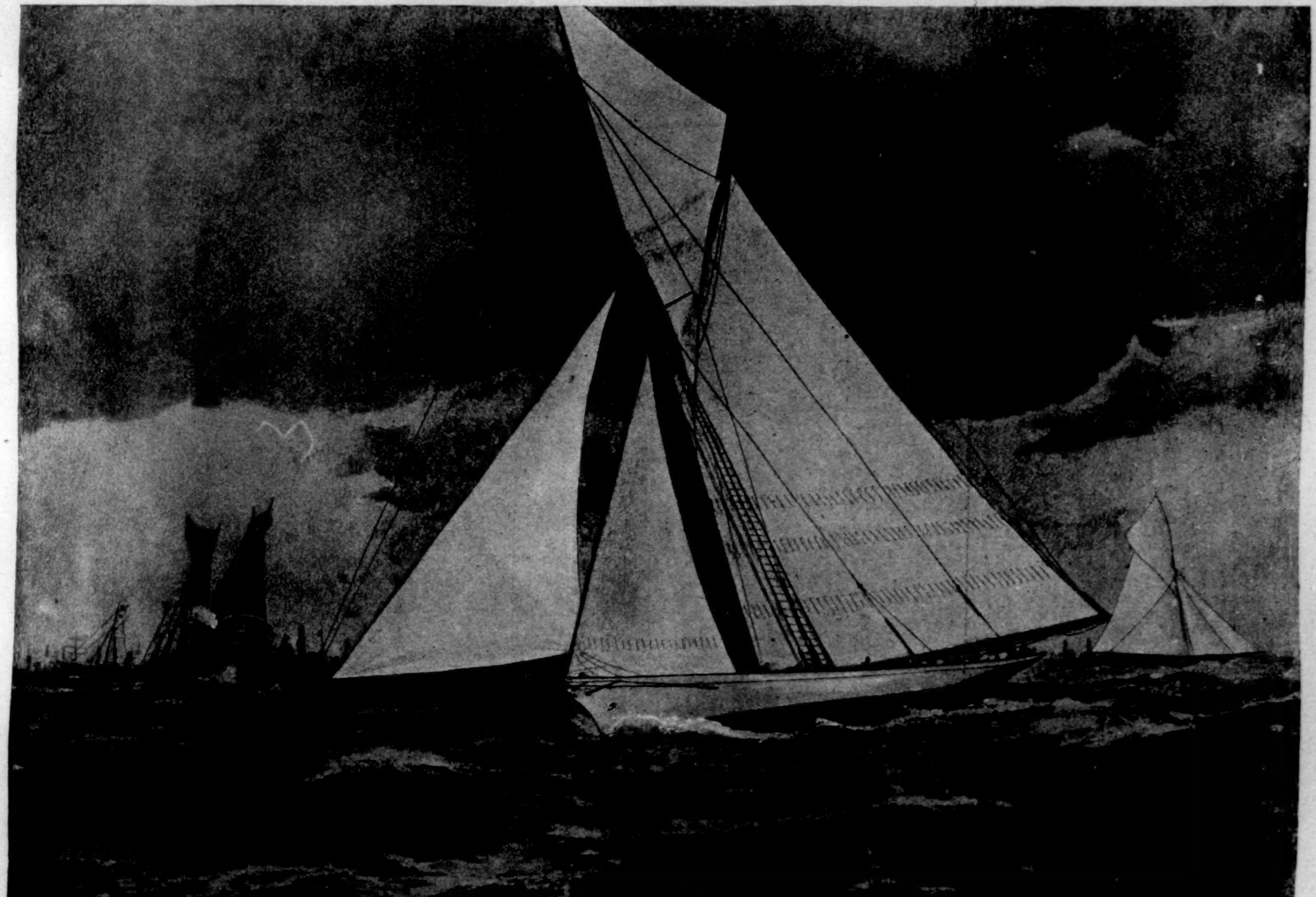
Mayflower.
Galatea.

Start.			*Finish.*			*Elapsed.*			*Corrected.*		
H.	M.	S.	H.	M.	S.	H.	M.	S.	H.	M.	S.
10	56	12	4	22	53	5	26	41	5	26	41
10	56	11	4	35	32	5	39	21	5	38	43

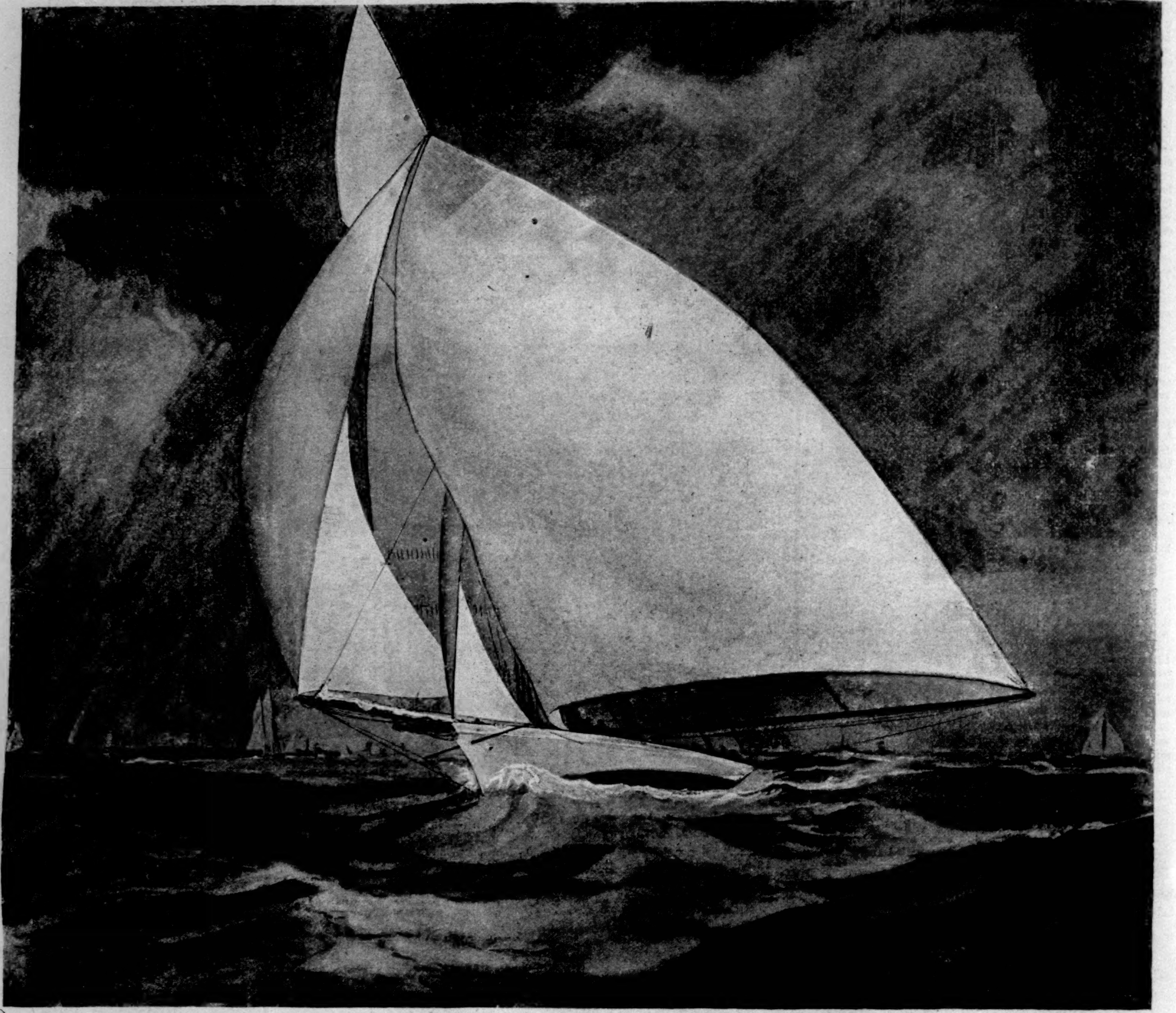
Thus the *Mayflower* won by 12 minutes 2 seconds, corrected time. The second race was sailed on September 11th, 20 miles to leeward, southeast, and return. The wind was extremely poor at times and was very unsteady. It finally died out altogether, and then came off the shore from the westward, so that the yachts had it abeam when they should have been beating to windward. Cutters were supposed to be fast in light airs, but the *Galatea's* only gain on the *Mayflower* in this race was made when the breeze freshened a little, after the racers had rounded the outer mark. As a test of speed this race was so unsatisfactory that I shall devote no space to it. The starting signal was given at 11.20, and the yachts made fair time to the outer mark, rounding it as follows: *Mayflower*, 1.55.05; *Galatea*, 2.10.20. The sloop had gained 13 minutes 45 seconds on the run. From 3 till 4.17 the yachts were in the doldrums. The *Mayflower* then got a slant of wind from the west-northwest which carried her far ahead of the *Galatea*. This bit of luck netted the *Mayflower* a gain of eight or nine minutes, and she beat the *Galatea* from the outer mark to



THISTLE ON FOURTH TACK—OUTSIDE RACE WITH *VOLUNTEER.*



VOLUNTEER ABOUT TO ROUND OUTER MARK-BOAT—SECOND RACE WITH *THISTLE.*



VOLUNTEER RUNNING IN NEAR LIGHT-SHIP.

the finish 16 minutes 3 seconds, winning the race by 29 minutes 9 seconds. The official figures follow:

	Start.			*Finish.*			*Elapsed.*			*Corrected.*		
	H.	M.	S.	H.	M.	S.	H.	M.	S.	H.	M.	S.
Mayflower......	11	22	40	6	11	40	6	49	00	6	49	00
Galatea.........	11	24	10	6	42	58	7	18	48	7	18	09

The next challenger for the cup was the *Thistle*, owned by a syndicate of Scotch gentlemen, for whom she was designed by G. L. Watson. Again the indomitable General Paine came forward and built the steel sloop *Volunteer*, designed by Edward Burgess. She sailed two trial races with the *Mayflower*. The first one, over the inside course, was abandoned inside of the Hook for want of wind, with the *Volunteer* about 100 yards ahead. The second was sailed on September 16, 1887, over an outside course of 38 miles, in a stiff breeze. It resulted in a decisive victory for the *Volunteer*, and also proved that the *Mayflower* could beat the *Thistle*, which went over the course. The course sailed over was 10 miles to leeward, southeast by south, 9 miles west-southwest, 9 miles east-northeast, and 10 miles dead to windward to the finish at the *Scotland* Light-ship. The *Mayflower*, after rounding the outermost mark, was forced to house her top-mast, but the *Volunteer* carried a working top-sail to windward.

The *Volunteer* beat the *Mayflower* 16 minutes 2⅗ seconds. The *Thistle* was accurately timed on the windward leg of the course. The *Mayflower* beat her 1 minute 58 seconds, and the *Volunteer* defeated her by 14 minutes 40⅗ seconds. This little brush of the *Thistle's* settled in the minds of experts all doubts as to her failing to win the cup. The first race of the *Thistle* and *Volunteer* was sailed on Tuesday, September 27, 1887, over the New York Yacht Club course, and the cutter was outsailed from start to finish. The wind was light from south-southeast, shifting to southwest. There was but one period of uncertainty in the race. The *Thistle* crossed the line 1 minute 52¼ seconds ahead of the *Volunteer*. At 12.39—six minutes after crossing—the *Thistle* tacked and headed for the Long Island shore. Captain Haff held his port tack. The *Thistle*, seeing this, went about again. At 12.45 the *Volunteer* went on the starboard tack and was crossing the *Thistle's* bows when the latter tacked at 12.46.25. The race was decided then and there. After that the *Volunteer*, first catching the breeze through the Narrows, simply walked away from the cutter. The sloop passed Buoy 10 at 2.21.08, and the cutter at 2.36.45. The former had gained 17 minutes 29¼ seconds up to this point. The racers had a tolerably good breeze going out to the light-ship, which the *Volunteer* turned at 3.42.12, followed by the *Thistle* at 4.01.15. The *Volunteer* gained 3 minutes 26 seconds on the reach out. The sloop passed Buoy 10 on the return at 4.36.15, having made the run from the light-ship in 54 minutes 3 seconds. The *Thistle* rounded the buoy at 4.52.47, having accomplished the run in 51 minutes 32 seconds, thus gaining 2 minutes 31 seconds on the *Volunteer* on this leg. In the run from Buoy 10 to the finish the *Volunteer* gained 1 minute 4½ seconds. The following are the official figures:

	Start.			*Finish.*			*Elapsed.*			*Corrected.*		
	H.	M.	S.	H.	M.	S.	H.	M.	S.	H.	M.	S.
Volunteer....	12	34	58¾	5	28	16¾	4	53	18	4	53	18
Thistle	12	33	06	5	45	52¾	5	12	46¾	5	12	41¾

The *Volunteer* therefore won by 19 minutes 23¾ seconds, or about 2½ miles. The second race was sailed on Friday, September 30th, 20 miles to windward, east by north, and return. The breeze at the start blew about 15 miles an hour. It soon diminished to about 10 miles. After the vessels rounded the outer mark it freshened steadily, and at the finish was blowing more than 20 miles an hour. It was an unusually true wind, making but one shift of four points to the southward, and then going back to east by north. The shift favored neither boat. The *Volunteer* went to windward of the *Thistle* at the very start, and decided the race in the first board. On the starboard tack the yachts had the sea abeam, and on the port tack ahead. On the latter the *Volunteer* beat her opponent much more than on the former. The *Thistle* gained on the run in, again demonstrating that she was fast before the wind. If she had not been all cut away under the water forward, she would probably have been a much better windward yacht. The racers rounded the outer mark as follows: *Volunteer*, 2.26.40½; *Thistle*, 2.41.00. The sloop beat her antagonist in the windward work 14 minutes 49¼ seconds. On the run in the *Thistle* gained 2 minutes 54½ seconds, so that the *Volunteer* won by 11 minutes 47¾ seconds. The official figures are as follows:

	Start.			*Finish.*			*Elapsed.*			*Corrected.*		
	H.	M.	S.	H.	M.	S.	H.	M.	S.	H.	M.	S.
Volunteer......	10	40	50¾	4	23	47	5	42	56½	5	42	56½
Thistle;........	10	40	21	4	35	12	5	54	51	5	54	44

The dimensions of the competitors for the *America's* cup are instructive. They are as follows: *Magic*, water-line length, 78.11 ft.; beam, 20.9; draught, 6.7. *Cambria*, water-line length, 100 ft.; beam, 20.5; draught, 12.4. *Sappho*, water-line length, 119.4 ft.; beam, 27.4; draught, 12.8. *Columbia*, length, 96 ft.; beam, 25.1; draught, 6. *Livonia*, 107.5 ft.; beam, 23.3; draught, 12.8. *Madeleine*, length, 95.2 ft.; beam, 24; draught, 7.4. *Countess of Dufferin*, length over all 107 ft.; beam, 24; draught, 6½. *Mischief*, length on water-line, 61 ft.; beam, 19.10; draught, 5.4. *Atalanta*, water-line length, 64 ft.; beam, 19; draught, 5½. *Genesta*, length, 81 ft.; beam, 15; draught, 13. *Puritan*, length, 81 ft. 1½ in.; beam, 22 ft. 7 in.; draught, 8 ft. 8 in. *Galatea*, length, 87 ft.; beam, 15; draught, 13.03. *Mayflower*, length, 85 ft. 7 in.; beam, 23 ft. 6 in.; draught, 9 ft. 9 in. *Thistle*, length, 86.46 ft.; beam, 20.03; draught, 13 8. *Volunteer*, length, 85.88 ft.; beam, 23.02; draught, 10. All the lengths are on the water-line, except that of the *Countess*.

If these figures show anything, it is that the American and English yachts are approaching one another in model, and that our present vessels are much more substantial and sea-worthy craft than those we turned out fifteen or twenty years ago.

There was very little change in American designs previous to the advent of the famous Scotch cutter *Madge* in 1881. To be sure, Commodore Robert Center had designed and built the stanch cutter *Volante*, but most yachtsmen regarded him as an Anglomaniac. Other cutters followed, but the *Madge* carried the day. She is of the extreme type, 38 ft. 6 in. on the water-line, 7 ft. 9 in. wide, 46½ feet over all, and 8 ft. 4 in. draught. She was matched against the *Schemer*, *Wave*, *Shadow*, and *Mistral*. The *Schemer*, for instance, is 39.1 ft. over all, 36.4 on the water-line, and 14.6 ft. beam. The *Madge* beat every boat she met with ease, and in anything like a sea-way played with them. She taught us a good lesson as to the value of depth, and one of the best results of it was the building of the cutter *Bedouin*, designed by John Harvey, a man who deserves much more praise than he gets. The *Bedouin* is a fine type of vessel, possessing much more beam than the old style of English cutter. She has a beam of 15 ft. 6 in., with a water-line of 70 ft. 6 in., while the *Galatea* has 15 ft. of beam to 86 ft. of water-line. The *Bedouin* wrestled for the supremacy with the new *Katrina* all through last year's cruise of the New York Yacht Club, and whenever there was any breeze she always beat her opponent.

Since the advent of the *Madge*, our best yachts have been made narrower and deeper, and we have adopted the best features of the English rig. Such yachts as the *Titania* and *Volunteer* are not sloops at all, but simply centre-board cutters. What changes were introduced in designing the *Mayflower?* I quote Mr. Burgess: "We had certain points in view in designing the *Mayflower*, which we thought would make her better than the *Puritan*. In order to make her *easier in a sea-way*, her bilge was made slightly easier, and the centre of gravity lowered, the centre of buoyancy being considerably lowered also." The Italics are mine. What are the main differences between the *Volunteer* and *Mayflower?* The former is a trifle longer, her beam at the water-line is a little less, and her draught is a little greater. I suppose there can be no doubt that the *Thistle* is the best yacht that ever came after the cup. Certainly she fully proved her superiority to all her English competitors. What striking change of design did she present? On a water-line of over six inches less than the *Galatea* she had five feet more beam. The *Galatea* carries 81.5 tons of lead on her keel. The *Thistle's* ballast amounts to 62 tons, and the *Volunteer's*, partly inside and partly out, to 55 tons. Speed is the first consideration in a racing yacht; but if it can be shown that the best speed can be got out of a vessel that has plenty of head room and plenty of elbow room, and will ride out a gale of wind, then the yachting problem will be solved, and a man can own a racing yacht in which he can cruise around the world.

ELECTRIC LIGHTING IN NEW YORK.

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ELECTRICAL EXPERT OF THE BOARD OF ELECTRICAL CONTROL, NEW YORK.

GENERATING AND DISTRIBUTING.

THE extensive introduction of electricity into many industries to which it has now become indispensable has made the work of providing means for its distribution in crowded places the most difficult problem of electrical engineering. Of the thousands of lights seen in our towns and cities, every one of the arc lights requires for its operation all of the force which is developed by a one-horse-power steam-engine, and an equal force is consumed by ten of the small or incandescent lights. These lights are often several miles from the central building or station where the machinery is operated, and from which this power must be distributed in the form of electricity. Although the most valuable feature of electricity is that it furnishes a means of transmitting power with no troublesome motion, and in an incomparably more compact form than any other agent, the fact that such enormous quantities of energy are demanded in closely settled districts requires the running of conductors which are small only in comparison with any other means of distributing the like amount of power. The observer in the street sees only the silent wire which if it is the size of a lead-pencil he considers rather large. If this wire is supplying its usual quota of fifty arc lights, it is carrying from house to house about fifty-horse-power, which, being entirely invisible, is likely to lack appreciation. The same power could not be carried by a moving belt, running at the usual speed of about half a mile a minute, unless the belt were one foot wide. Or to illustrate further the compactness of electrical transmission by comparison with steam, a pipe about six inches in diameter would be required under the usual conditions to transmit the same power by the latter. The use of any such means in public streets, for connections from point to point to transmit power, is of course out of the question. For this reason alone the new convenient systems of house-to-house distribution of force which have sprung up since the birth of industrial electricity, and to which the cheapness of the electrical conductors is indispensable, would have succeeded.

It is hard to realize that as much power is being carried by each of these silent electric-light wires in the street as can be carried by the older and purely mechanical means of transmission, such as moving belts, and pipes with fluids under pressure. The real work done and the power conveyed are fully as great with the modern wire, while its form is more manageable for many of the uses to which it is put. And it is likely that the continuation of the rapid progress which has already made electrical as common as mechanical transmission will, in the near future, make it the chief means of doing work at a distance, with belting, shafting, and pipes as local accessories for special cases. In producing light, the current may be thought of as a means of making the necessary heat to produce the light, in the same way that gas or oil is sometimes used to produce them, and it may be considered roughly that the fuel which would produce a light equal to the arc electric light will run a steam-engine of one horse-power. In other words, if, instead of converting a horse-power into electricity, carrying this along a wire, and changing it into heat and light, we build a fire at the place sufficient to give the same light, we will have carried one-horse-power of fuel to the point, and made a fire capable of doing the same amount of work. With the smaller lights the explanation is the same, allowing for each light one-tenth the amount of fuel.

With motors and other appliances which convert the power into tangible form, equivalent and identical with the power consumed at the station, the absorption, transmission, and return of the power are self-evident and need no explanation. And upon a very complete investigation into all other ways in which electricity is consumed, such as in operating upon chemicals, heating masses of ore, in smelting, etc., it will invariably be found that the electrical energy consumed is nearly the equivalent of the work accomplished.

If all other means of carrying power require a moving conveyer, how can the same power be conveyed by electricity in a conductor of one-hundredth the size and apparently without any motion whatever? The answer is, that the conductor is not really motionless, but is in intensely rapid vibration. Instead of the entire conductor moving in one direction, as with a body of steam or a leather belt, each particle moves back and forth an infinitesimal distance within its own bounds with incredible rapidity, and transmits its energy to the next particle, thus leaving the conductor as an aggregate apparently without motion. This will seem less absurd if we reflect a moment upon the difference between a number of men carrying buckets of water, and the old plan of passing buckets of water for extinguishing fires, when the men formed a line and passed the buckets from hand to hand while themselves remaining stationary. The difference between the two plans is very much the same as the difference between the transmission of power by mechanical motion and by electrical motion or electricity. In the first case the entire body moves, and the work transferred is equal to the strength of the body multiplied by the speed with which it moves. In the second case, only the particles of the body move, the motions being very short and at greater speed, returning immediately to the points of starting; so that while here there is a more rapid transfer, the conducting body as a whole is stationary. In this case the work transferred is also equal to the strength of the body multiplied by the speed of its motion.

In other words, the difference between an electrical conductor and a moving belt is that the latter conveys motion by moving itself bodily, while the former does it while standing still, by passing inappreciable motions from particle to particle along the line. The power transmitted by the chain of electrical oscillations in a comparatively small conductor is equal to that carried by a large belt, because the motions have an enormous velocity and carry a much greater tension—in the same way that the power of a belt is greater when run at a high speed, and when the pulling power or tension of the belt is made greater.

The strain which is going on in an electrical conductor is as real as the strain on a belt. When a heavy machine which is driven by a belt from an engine is suddenly made to run hard, the belt will slip on the wheel or slow down the engine. And when an engine is driving an electric machine connected to wires, it is a common occurrence for some sudden labor which is required at the distant end of the wires to break the belt, to cause it to slip and run off the pulley, or even to stop the engine, through the increased strain on the electrical motions in the wire. It is common among the men in charge of electrical generators and steam-engines to exclaim that more machines have been put on the line, or that some trouble has occurred, because they hear the "belt squeak."

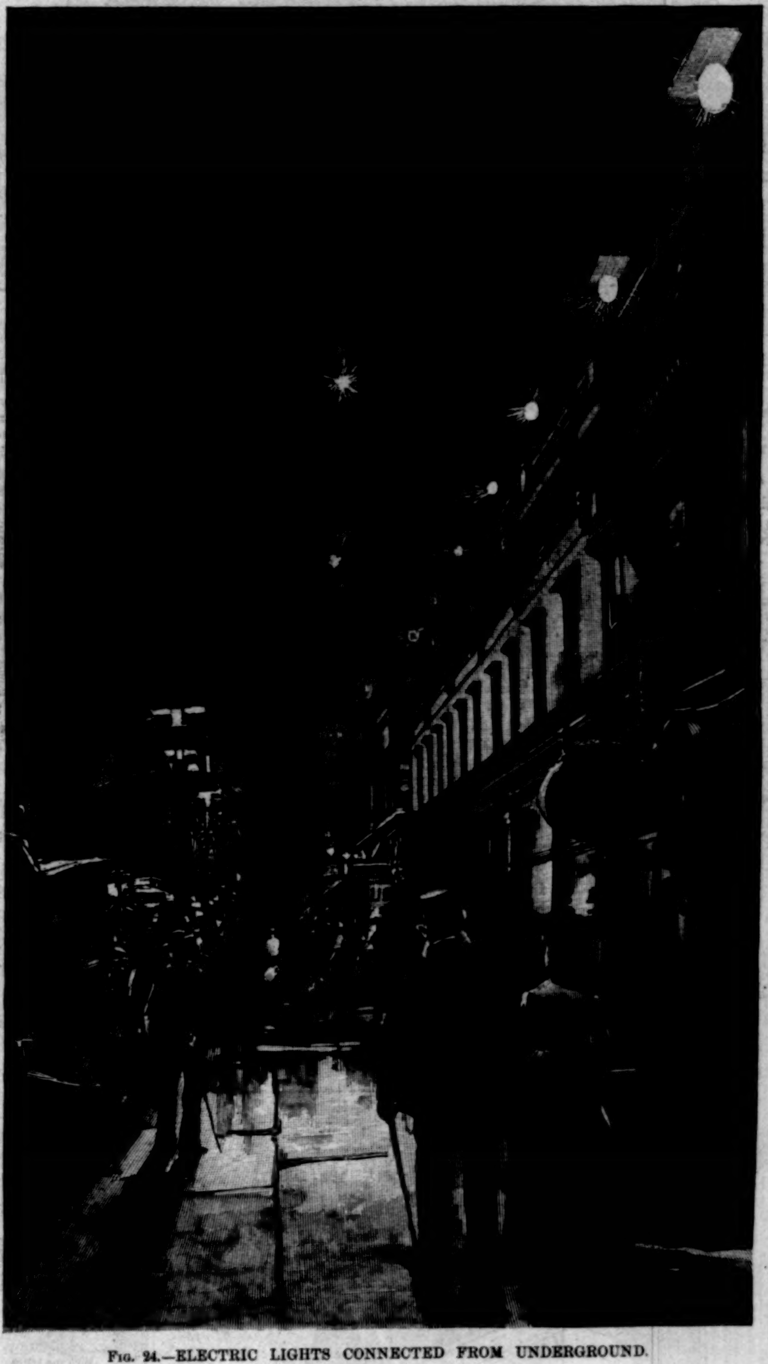

FIG. 24.—ELECTRIC LIGHTS CONNECTED FROM UNDERGROUND.

We see that by electricity alone, through its power of carrying a great deal of motion quietly, in conductors which are very small, because the work through them is done at high speed and at great pressure, a new set of industries can be carried on. These industries requiring heat, light, and power in great quantities, deliverable easily at any and every place, could not have been thought of before the advent of electricity, when the slow and clumsy moving mechanical distributors were the only means known. Since the new agent has become known, its wonderful properties, useful for producing almost every kind of physical effect, have been adapted to the corresponding commercial applications with surprising rapidity and ingenuity. The commercial development of electricity has been limited only by the time required for the public to learn that it is at hand for their every service. They have now learned this, and, we think, sometimes carry the idea of its universal applicability too far—a result due, no doubt, to the suddenness of its growth, which causes impossibilities to be expected.

The principal uses to which electricity is put to-day, outside of the all-important classes of electric signalling and electro-chemical work, are, as we have said, for furnishing light, heat, and power. And as a striking illustration of the industrial growth of this branch we propose to give a description of it as it exists in the city of New York, where there are, including all kinds, about 160,000 electric lights, of which 7500 are of the larger kind.

New York possesses more of the practical applications of electricity than any other place in the world, and is the most extensively developed centre of electrical industries. The bulk of the electricity used is supplied by seven companies, whose single generating establishments or stations are distributed so as to divide the entire territory of the city. The lines used by each company for delivering electricity overlap these districts, however, to a considerable extent, so that, as with the pipes of the gas companies, most of the streets are reached by the wires of two or three electric-light companies. The United States Company covers the lower part and a part of the middle of the city. The Brush Company covers the middle section. The Manhattan covers the upper east side, upper middle, and middle parts. The East River covers the east side and part of the middle section. The Harlem covers the upper east side. The Mount Morris covers the extreme west side through its whole length. And the Edison has three stations, one in the lower part and two in the middle part, each supplying a compact section with about fifteen thousand small lights.

The wires of these companies in most places overlap each other, as stated before, and are of all kinds of construction, some old and some new, most of it in the worst disorder, and some of it, of recent construction, well arranged.

The Brush and Mount Morris companies supply nothing but large lights and motors. The Manhattan Company supplies small lights exclusively. The Harlem Company supplies large and small lights and motors. The United States and East River companies supply both large and small lights and motors. The Edison Company supplies only small lights and motors. They all furnish heat occasionally when their wires get out of order. The currents which are distributed in these districts over their several net-works of wire are generated in large buildings containing steam-engines of great power, coupled to and driving the necessary electrical generators. These establishments, of which there are nine, are most impressive evidences of the growth of electricity. A visit to them shows at once that great quantities of power are being dealt with on the most economical plans. A glance at the engines shows that they are of the most improved type, run according to the best methods for securing high economy, while the heavy labor of the engines, combined with the perfect order and smooth economical running of the machinery within the building, shows that nearly the whole of the thousands of horse-power produced is actually being carried out of the building to all parts of the city by the mass of wires which are connected to the generators.

An idea of the appearance of the generating-room of the station of the Brush Electric Light Company, at 210 Elizabeth Street, the largest of its kind in the world, may be had from Figure 1. The electrical generators, or dynamos, are arranged in rows, with sufficient space between for the passage of the attendants, who must be constantly on the lookout to see that each machine is running properly at its high speed, and not becoming heated. Each machine is driven by a belt, about a foot wide, passing up through the floor from a shaft supported from the ceiling below, which is driven by the engines placed directly under it. About fifty-horse-power is transmitted to each of the dynamos from this shaft. The amount of current generated by each machine is adjusted automatically by electrical regulators in small boxes suspended near by. If the current drawn by the wires temporarily exceeds at any time the usual amount, the corresponding belt is insufficient to turn the armature, or revolving part of the dynamo, against the increased magnetic attraction in the machine. Then the belt slips on the pulley, producing a creaking noise. In the conversion of the power into electricity by the machine not more than one or two tenths is lost, and the converted force, nearly equal to the original, is carried off by two small wires not larger than a clothes-line. That all of this force is actually in these wires may be proved readily by connecting to them another machine similar to the generator. This machine will then run at the same speed as the generator; and if a similar driving-belt is placed around its pulley, it will act as a motor, and develop a force equal to that in the first belt, with, say, one-quarter deduction for the losses of transformation in the two machines.

Thus we have it visibly demonstrated that this enormous power is not lost, but is flowing quietly through the small wires, ready to be reconverted for use at pleasure. The two wires from each of the eighty machines in this station are laid under the floor in glass tubes imbedded in cement, and carried to suitable terminals forming a large switch-board at the front of the building, shown in Figure 2. From this point the wires are carried out of the building and scattered. Every dynamo is constantly emitting bright, vicious-looking green sparks at the point where connection is made with the bundle of wires, which is revolved under the action of the powerful magnets, to generate the current. These sparks are in fact the newly generated electricity passing out from the revolving generating coil to the stationary terminals of the main wires which lead under the floor, and, strange to say, when once in these wires, the current is perfectly safe from sparking, and is so in every solid and continuous conductor. It is only

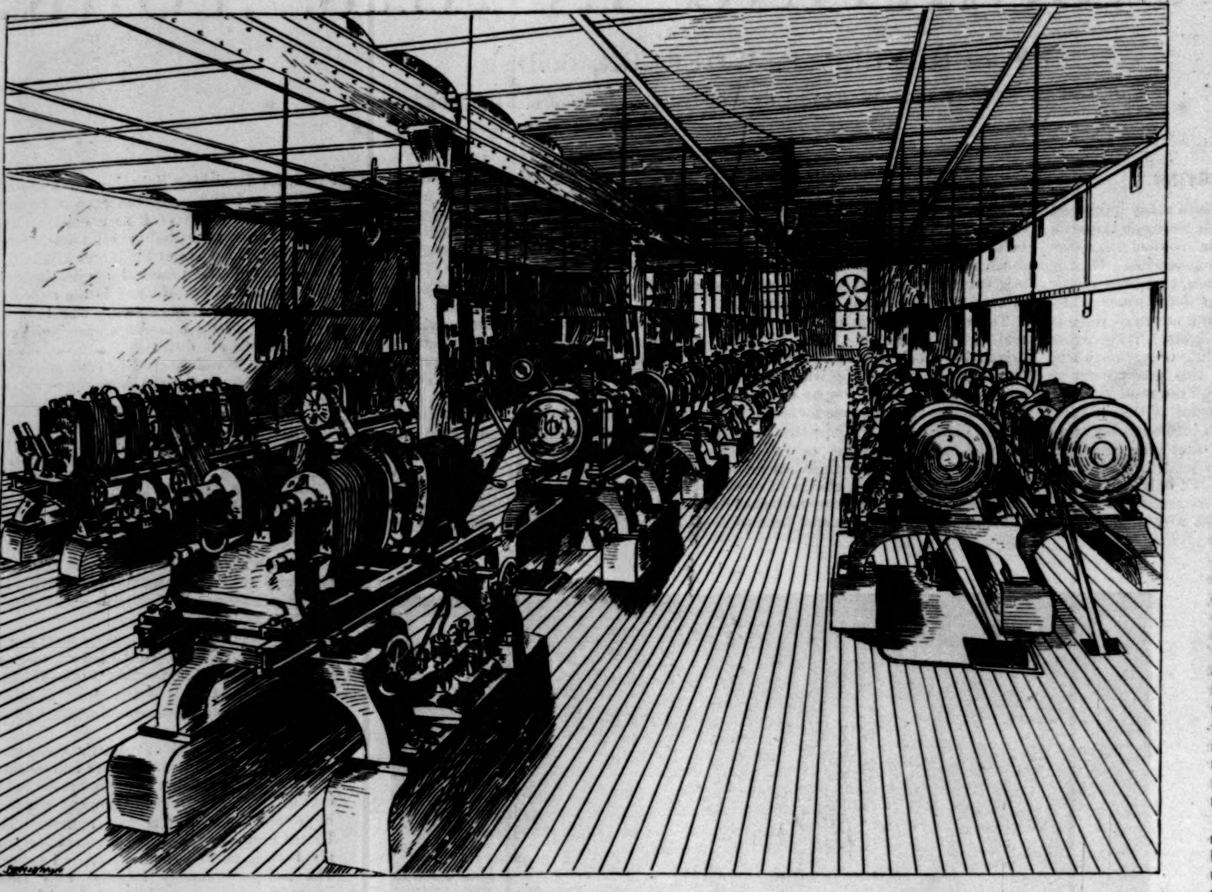

FIG. 1.—DYNAMO-ROOM OF BRUSH STATION.

where connection is interrupted that sparking occurs, and the necessity for the sparking mentioned arises from the fact that the connections to the revolving part of the machine cannot of course be made solid, a fact often misunderstood.

Going to the floor below the visitor sees the picture presented in Figure 3, and is at once struck by the size of the four powerful engines which are required to drive the dynamos above.

Returning to the front of the dynamo-rooms he finds the wires from the dynamos terminating in flexible cables with clamps at their ends, near a large switch-board, upon which, arranged in reg-

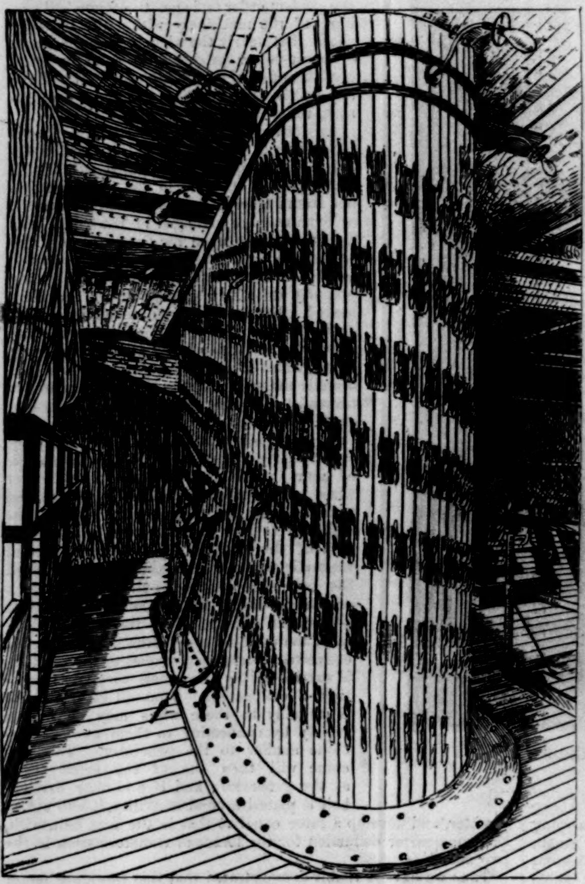

FIG. 2.—SWITCH-BOARD IN BRUSH STATION.

ular order and numbered, are a multitude of brass sockets to which are attached the wires leading out of the building (Figure 2). The terminal of each wire has its name and the direction of its route plainly marked on it, so that any circuit may be easily picked out. By clamping the ends of the flexible cables leading from either of the dynamos to these terminals a current may be supplied to any line or circuit from any dynamo. This arrangement is particularly useful for making temporary changes in the supplying of any line in case of interference with the wires, etc. This switch-board has just been destroyed by fire, two days after the picture was taken. The fire was probably caused by some of the wires getting out of order.

The lights supplied by the company are classified and placed on the appropriate circuits as follows: those for street lighting, called "city lights," are connected on "city circuits"; those for lighting stores are on "commercial circuits"; and such as are needed in the daytime are supplied by "day circuits." On the wall by the switch is posted a list giving the precise hour and minute when each circuit is to be started and stopped for every day in the year, as regulated by the time of sunrise and sunset. At the required time the attendant connects the cables from the proper dynamos to the circuits to be lighted.

The wires from the switch-board, after passing from the building in a body, spread out upon a pole on the opposite side of the street, as seen in Figure 4, and stretch in all directions, reaching all parts of the city, silently carrying with them the enormous power of the station. The wires leaving this building have in them about two-thousand-horse-power, which is equivalent to the power, when in motion, of all the belts which come up through the floor into the dynamo-room. This station has just been rebuilt, having been destroyed by fire two years ago.

The machinery of the other stations for running arc lights is much the same as this in principle, though perhaps not so well arranged, and will not be further described, as we have yet to consider the other parts of the lighting systems.

Our large picture shows the appearance of a street lighted by electricity. The view is taken in Grand Street, near the Bowery, a short distance from the Brush station. It is undoubtedly one of the most brilliantly lighted streets in the world, and this representation of it gives an idea of the liberal use which is now made of these lights.

The application of electricity for furnishing power is next in importance, and consumes the bulk of the current outside of that which is used for lighting. The machines by which it is converted into power —electric motors—are the same in their general form and operation as dynamos, and differ only in the details which are added to render them convenient in regulating their power, etc., to the special uses for which they are employed. It is on account of the ease with which they are managed that they are particularly advantageous for all kinds of work. To be so fitted for the several kinds of service, they require attachments by which they may be regulated in respect to speed or power, or both, according to the demands of machinery which they are required to run, and the differences in motors, therefore, lie in the means for accomplishing this. We illustrate a motor (Figure 5) arranged for one of these special purposes, that of running a fan at variable speeds to produce a mild or a strong breeze. The motor is of the smallest size (one-eighth of a horse-power), with the Crocker-Wheeler governor. The speed is regulated by the cord attached to the small lever at the left, the action of which is simply to slide the shaft and armature sideways away from the stationary magnets; this reduces the power of the machine and causes the fan to run slower.

LAMPS.

There are two kinds of lamps in use, entirely dissimilar in principle and construction, and therefore suitable for entirely different purposes. They are founded on the two different ways in which electricity may be converted into light. In one, known as the incandescent, the light is produced by passing a small current through a fine wire or filament, which it heats to a dazzling brilliancy or incandescence. In the other, the light is obtained by burning off the ends of two large rods with a heavy current which jumps bodily from one to the other across a small space, taking a slightly curved path, called the electric arc, from which its name arc light is derived. This is the intensely brilliant light seen in our streets.

The incandescent lamp produces a soft, steady light, about equal to that of a gas-burner, and therefore suitable for in-door use. Its filament is sealed up in a glass globe, and uses a small current of steady pressure. This filament is very slender, and yet, when emitting light, it appears to be of considerable size, owing to the effect of the light upon the eyes. Our artist has endeavored to give two views indicating the appearance of the same lamp when lighted and when not lighted. The air is exhausted from the globe to prevent the thread-like filament being instantly burned up by the great heat. If the air is admitted by making a hole in the globe, the filament will vanish with a flash, and this occurs so quickly that it is impossible for it to set fire to anything. The lamp is lighted equally well by a continuous current or by one flowing alternately in opposite directions. The study of the phenomena produced by this intensely heated filament in the vacuum of its globe, as disclosed by scientific observing instruments, has brought out many interesting discoveries in the sciences of light, heat, and radiant energy, which, however, do not belong to this subject. The perfecting of these lamps by Edison and others about eight years ago was the cause of considerable excitement at that time.

The arc light, which is much older than the incandescent, is now produced practically by passing a powerful current between the points of two large carbon rods, which are kept close together by an automatic mechanism known as the regulator of the lamp. The space allowed between the tips of the rods, across which the current jumps, is about one-sixteenth of an inch, and the duty of the regulator is to move one of the rods toward the other as fast as the tips are burned off by the intense heat, keeping the space to be jumped by the current as nearly uniform as possible. The principle of the regulator, whose sudden action is sometimes the cause of the flickering noticeable with these lights, is shown in Figure 8. The current from the line, after reaching the upper carbon, passes across the tips and through the lower carbon, thence through a wire which is wound a few times around a magnet, thence to the continuation of the line, and on to the next lamp. This magnet attracts a lever, which when raised grasps the upper carbon through the agency of a washer, which allows the carbon to slide downward through it, except when it is tilted by the action of the magnet and lever, as shown in the drawing. The upper carbon is arranged in suitable guides to slide straight up and down, and the lower carbon is held stationary. When at

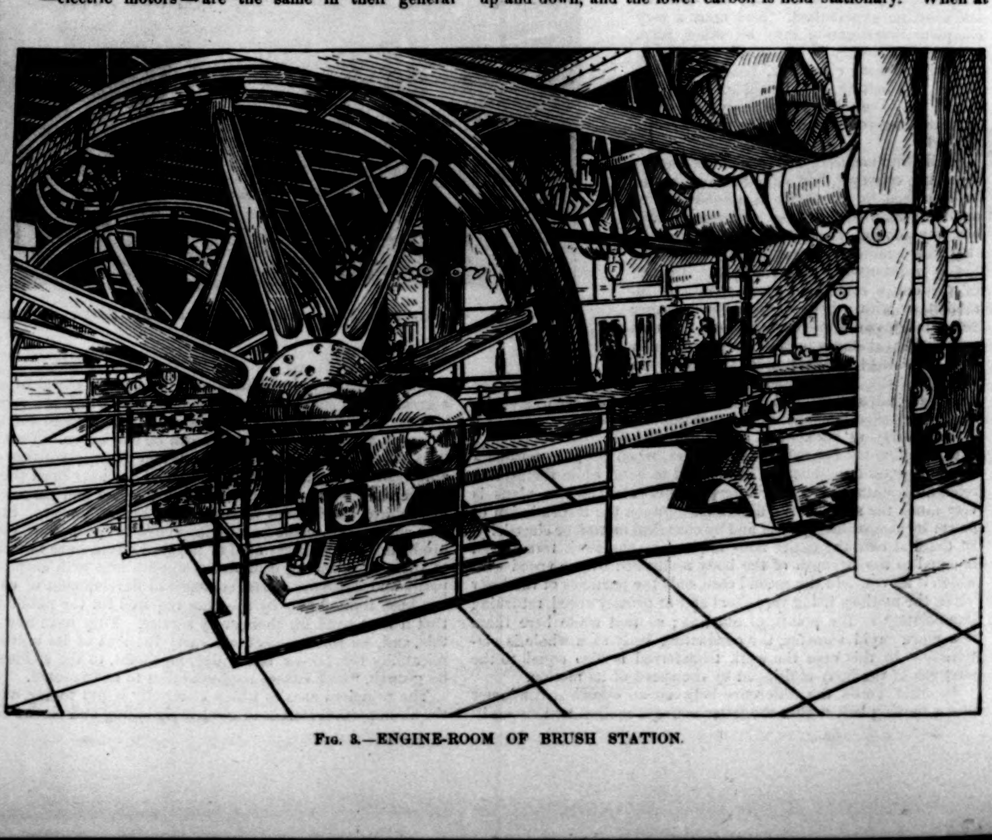

FIG. 3.—ENGINE-ROOM OF BRUSH STATION.

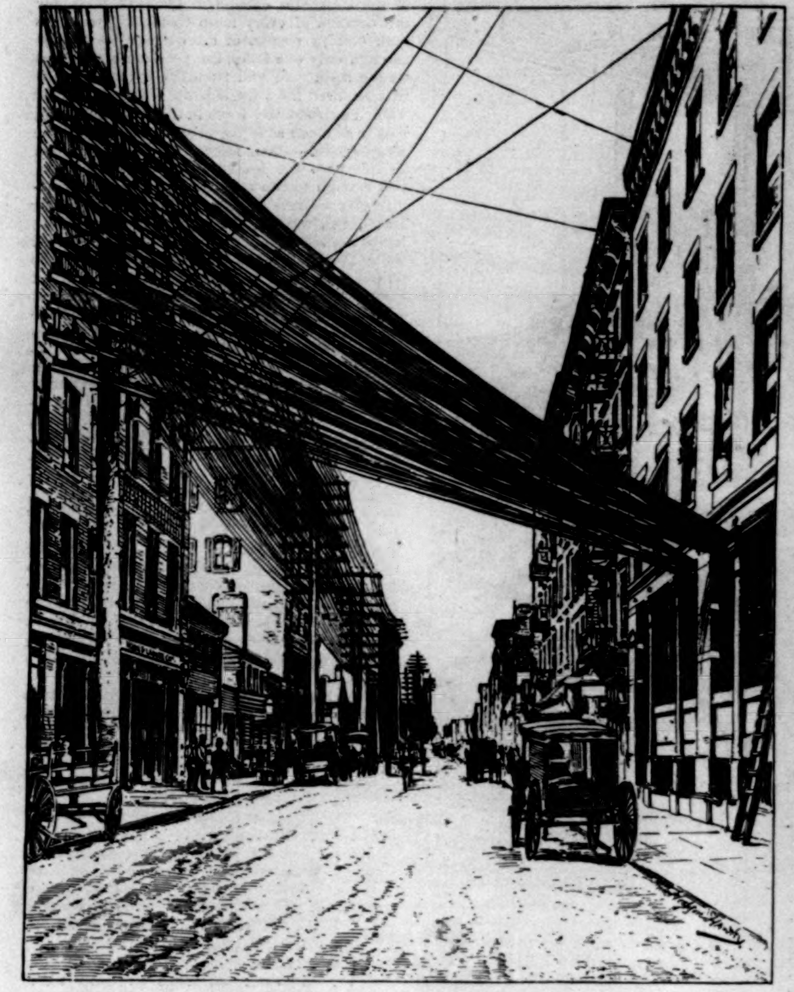

FIG. 4.—ELECTRIC-LIGHT WIRES LEAVING THE BRUSH STATION.

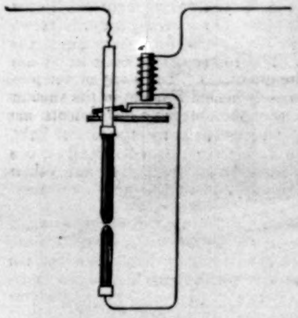

Fig. 8.—ARC LAMP REGULATOR.

rest the washer lies flat, and the upper carbon slides down until in contact with the lower one. When the current is turned on, it passes across the tips of the carbons, which at first are in contact, and around the magnet, causing it to raise the lever, tilt the washer till it grasps the carbon, and thus elevate the movable carbon, until the increased length of the space between the tips weakens the current and checks the lifting action of the magnet. The light then burns steadily until enough of the tip is burned off to further weaken the current by increasing the space, when the magnet, being no longer able to support the carbon, lowers it enough to readjust the space. Then the burning of the lamp continues as before. The readjusting of the space is sometimes accompanied by a flicker of the light. It is interesting to note the action of the current in passing from the upper to the lower carbon. Although both tips are consumed, the current in passing from one to the other carries with it particles of the carbon, which are added to the end of the second carbon. This builds up material on the second carbon as fast as it is burned away, so that its length is not very materially reduced, and therefore a short rod is used in practice, while the rate of consumption of the other carbon is doubled and a longer rod must be used. As there is very little burned off of the end of the short rod, if this rod is held stationary, the position of the light produced at its end will not change, while if the long rod, which is consumed rapidly, were held stationary, and the short rod moved, the position of the light would change, moving rapidly along the length of the stationary rod as it was burned off. To keep the light stationary, which is desirable, the short or non-consumed rod is clamped stationary in a socket, and the long rod is fed down to it as fast as its end is eaten away. This sliding rod is placed above the other, so as to be moved downward by gravity, as well as for another reason. The piling up, on the lower tip, of the particles of carbon which are carried across by the current, forms a pointed or cone-shaped tip, while the carrying away of those particles from the upper carbon hollows it out on the end, leaving a crater-shaped depression. Figure 9, which is from a photograph, shows this formation at the ends of the rods. The effect of this crater, with a point or cone opposite it, upon the light which is produced between them, is to throw it downward from the crater as from a reflector, the point below not cutting off as much light as the crater would were it beneath; consequently this arrangement with the crater pointing downward is the best one for street lighting.

Fig. 9.—ARC LAMP CARBONS.

The second view shows the appearance of the lamp working regularly, smoked glass being used to reduce the light so that the tips may be examined closely. The lights are examined in this way by the lampmen, to see that they are working properly. It shows the shape of the tips and the length of the space between them. The irregularities on the outside of the carbons are scales, or heat blisters, which gradually disappear, some dropping off and the rest being vaporized as the combustion goes on. The shape of the crater of the positive carbon above, and of the pointed or negative carbon below, are clearly seen. The current passing across the space is not visible in the picture. It forms a faint blue flame, visible only upon very close scrutiny of the narrow space between the tips, the more intense light being produced by the ends of the carbons themselves, which are heated to intense brilliancy by this almost invisible current.

To give an idea of the effect of the darkened glass, which is used to deaden the light, so that the details may become visible, a third picture is prepared giving a full view of the same light. This was taken at a greater distance, as to make a picture possible it was necessary to bring in some of the darkness at the sides. At the same distance as the others its representation would have been a sheet of pure white the full size of the drawing. The light is so intense that nothing can be seen of the rods near their points.

The two separate classes of lights, the arc and the incandescent, require currents of different character, and therefore they are not supplied in the same way. As the arc lights require a heavy current, they are so connected that the entire current passes through each one in succession, while the incandescent lights, which require small currents, are connected, so that only a small portion of the main current passes through each one. This arrangement is known as connection in "multiple arc," while the former, adapted to arc lights, is known as connection in "series."

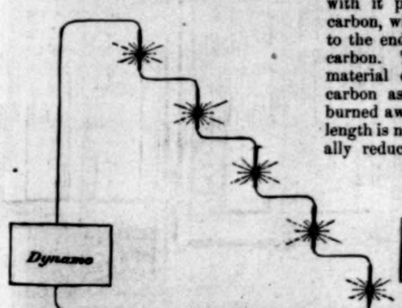

Fig. 12.—DIAGRAM OF "SERIES" CIRCUIT.

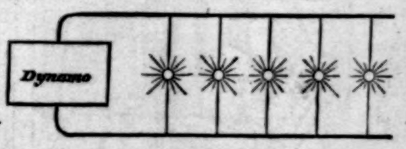

Fig. 13.—DIAGRAM OF MULTIPLE ARC CIRCUIT.

SYSTEMS OF DISTRIBUTION.

These methods of connecting the lamps and arranging the wires, together with the corresponding construction of the generating machines, for properly filling the wires without overcharging, and the appliances for lighting and extinguishing the lamps, make up the differences in the methods of lighting practised by the several companies. As the current from the wires is used for many other purposes besides lighting—such, for example, as running motors—the different arrangements are often termed more broadly "Systems of distribution of electricity."

There are several modifications of both the series and multiple arc systems; there is also a new one—the alternating current, or converter system—which is unlike either, and is superseding both in some places.

In the "series" circuit a single wire is carried from lamp to lamp, so that the current passes through each of the lamps in succession, returning to the dynamo generator after passing through the last lamp. In this arrangement the quantity of current used is only that required to operate one lamp, as the whole of the current, after passing through the lamp, reaches the next one and operates it, and so on for each lamp. But as some pressure is required to force the current through the first lamp, enough pressure must be added to carry the current through the next lamp, and still more for the purpose of carrying it through each succeeding one; so that while in the "series" system the mere quantity of current required is not increased, no matter how many lamps are

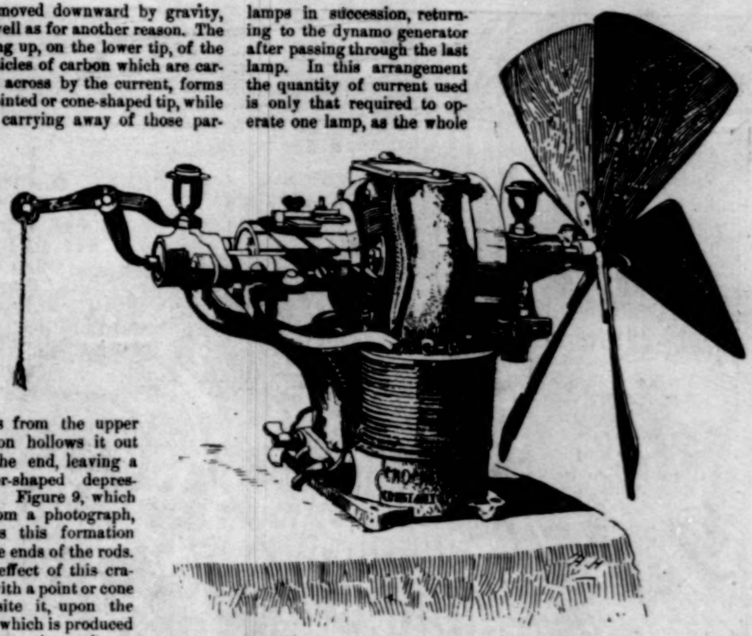

Fig. 5.—MOTOR WITH SPEED REGULATOR AND FAN.

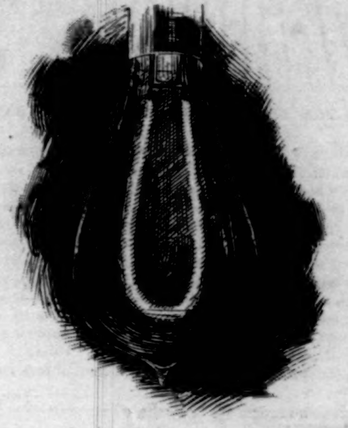

Fig. 6.—INCANDESCENT LAMP LIGHTED.

Fig. 7.—INCANDESCENT LAMP.

Fig. 10.—ARC LIGHT SEEN THROUGH SMOKED GLASS.

Fig. 11.—AN ARC LIGHT.

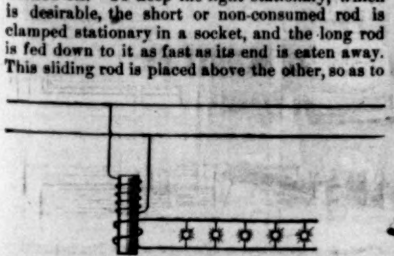

Fig. 14.—DIAGRAM OF A CONVERTER.

Fig. 15.—A CONVERTER.

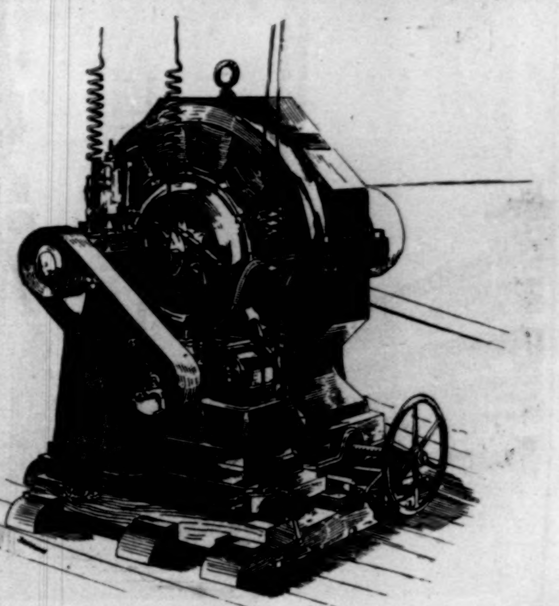

Fig. 16.—AN ALTERNATING CURRENT DYNAMO.